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**ST. CLOUD
STATE COLLEGE**

**GENERAL
BULLETIN**

1963

65

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ADDENDUM

1963-65 General Bulletin

The COST OF ATTENDANCE statements on page 16 of the 1963-65 St. Cloud State College General Bulletin have been revised as a result of action taken by the 1963 Minnesota Legislative Session. The revised statements will become effective for the Second Summer Session, 1963, and the Fall Quarter, 1963. The new tuition rates are as follows:

TUITION

Following is the schedule of tuition charges for the Minnesota State Colleges:

ON CAMPUS COURSES:

Fall, Winter, or Spring Quarters

Undergraduate:

Residents \$4.25 per credit hour

Non-residents \$6.50 per credit hour

Graduate:

Residents \$6.00 per credit hour

Non-residents \$8.50 per credit hour

Summer Sessions:

Undergraduate:

Residents \$5.50 per credit hour

Non-residents \$6.50 per credit hour

Graduate:

Residents \$6.00 per credit hour

Non-residents \$8.50 per credit hour

OFF CAMPUS COURSES:

All students--graduate or undergraduate, resident or non resident, regular school year or summer sessions . . .

\$8.00 per credit hour

Minimum tuition of any credit-granting course of instruction \$15.00

SAINT CLOUD STATE COLLEGE GENERAL BULLETIN 1963-1965

St. Cloud State College is a member of the American Council on Education, of the North Central Association of Colleges and Secondary Schools, and of the American Association of Colleges for Teacher Education. It is accredited by the North Central Association of Colleges and Secondary Schools and the National Council for Accreditation of Teacher Education.

Volume 19

JANUARY 1963

Number 1

Issued six times a year in January (3), February, September and October. Second Class Postage paid at St. Cloud, Minnesota.

ADMINISTRATION

STATE COLLEGE BOARD

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SCHOOL DEANS

Lyle E. Ball, School of Business and Industry

Irvamae Applegate, School of Education

Robert H. Wick, School of Science, Literature and Arts

COLLEGE CALENDAR FOR 1963-65

SPRING QUARTER 1963

MARCH

- 18, Monday—Registration, Check-out, pay fees.
- 19, Tuesday—Classes begin. Late fee of \$5 added to registration fee, cumulative at the rate of \$2 each additional day through March 25. Penalty of \$1 added for each change in registered schedule.
- 25, Monday—Registration and additions to schedules end.
- 25, Monday—Applications due for Fall Quarter Student Teaching assignments.
- 29, Friday—Applications for Comprehensive Examinations due in Academic Dean's Office.

APRIL

- 12, Friday—Good Friday (holiday).
- 15, Monday through Thursday, April 28—Entrance test battery. Reservations made at Student Personnel Office.
- 15, Monday—First preregistration appointments posted for Summer Sessions and Fall Quarter. Seniors and juniors April 22-26; seniors, juniors and sophomores April 29-May 10; freshmen S-Z May 13-17; freshmen A-H May 20-24; freshmen I-R May 27-31; all students June 3-7.
- 29, Monday through Friday, May 10—Applications for Graduation and Certificates of Readiness for Graduation for Summer Sessions and Fall Quarter due.
- 29, Monday—Applications for Graduation for Spring Quarter close.

MAY

- 2, Thursday—Comprehensive Examinations given Thursday and Friday, May 2 and 3.
- 10, Friday—A mark of "E" will be recorded for courses dropped after this date.
- 22, Wednesday—Preregistration check-out and fee payment begins for First and Second Summer Sessions. (First Summer Session preregistrations cancelled if reserved cards not picked up by 3 p.m., June 17. Second Summer Session preregistrations cancelled if reserved cards not picked up by 3 p.m., July 22.)
- 30, Thursday—Memorial Day (holiday).

JUNE

- 7, Friday—Official closing of Spring Quarter at 5 p.m.
- 8, Saturday—Annual Commencement Exercises at 11 a.m.

FIRST SUMMER SESSION 1963

JUNE

- 12, Wednesday—Registration, check-out and pay fees.
- 13, Thursday—Classes begin. Late fee of \$5 added to registration fee, cumulative at the rate of \$2 each additional day through June 19. Penalty of \$1 added for each change in registered schedule.
- 19, Wednesday—Registration and additions to schedules end. First Summer Session fees not accepted after this date.
- 20, Thursday—Preregistration and fee payment resumes for Second Summer Session and also for Fall Quarter.
- 21, Friday—Graduation applications close for First Session.
- 21, Friday—Applications for Comprehensive Examinations due in Academic Dean's Office.

JULY

- 1, Monday through Wednesday, July 10—Entrance test battery. Reservations made at Student Personnel Office.
- 4, Thursday—Independence Day (holiday).
- 5, Friday—A mark of "E" recorded for courses dropped after this date.
- 17, Wednesday—Official closing of First Summer Session, 5 p.m.

SECOND SUMMER SESSION 1963

JULY

- 22, Monday—Registration, check-out and pay fees.
- 23, Tuesday—Classes begin. Late fee of \$5 added to registration fee, cumulative at the rate of \$2 each additional day through July 29. Penalty of \$1 added for each change in registered schedule.
- 29, Monday—Registration and additions to schedules end. Second Summer Session fees not accepted after this date.
- 30, Tuesday—Preregistration and fee payment resumes for Fall Quarter. Fall Quarter preregistrations cancelled if not picked up by 12 noon, September 23.

AUGUST

- 2, Friday—Graduation applications close for Second Session.
- 2, Friday—Applications for Comprehensive Examinations due in Academic Dean's Office.
- 5, Monday through Thursday, August 14—Entrance test battery. Reservations made at Student Personnel Office.
- 14, Wednesday—A mark of "E" recorded for courses dropped after this date.
- 23, Friday—Official closing of Second Summer Session at 5 p.m.

FALL QUARTER 1963

SEPTEMBER

- 22, Sunday—Residence halls open at 1 p.m. for occupancy for Fall Quarter.
- 22, Sunday through Tuesday, September 24—New Student Orientation (transfer and freshmen).
- 22, Sunday—4 p.m. Convocation for all new students A-L in Stewart Hall Auditorium.
- 22, Sunday—7 p.m. Convocation for all new students M-Z in Stewart Hall Auditorium.
- 23, Monday and Tuesday—Registration, check out, pay fees. Fall Quarter pre-registration cancelled if not picked up by 12 noon, Monday, September 23.
- 23, Monday—Faculty Day. General and special meetings beginning at 8:30 a.m.
- 25, Wednesday—Classes begin. Late fee of \$5 added to registration fee, cumulative at the rate of \$2 each additional day through October 1. Penalty of \$1 added for each change in registered schedule.
- 30, Monday—Applications due for Winter Quarter Student Teaching assignments.

OCTOBER

- 1, Tuesday—Registration and change of course privilege ends. Fee payments not accepted after this date.
- 4, Friday—Applications for Comprehensive Examinations due in Academic Dean's Office.
- 7, Monday through Thursday, October 17—Entrance test battery. Reservations made at Student Personnel Office.
- 11, Friday—Preregistration instructions posted in College Chronicle.
- 24-25, Thursday and Friday—Central Minnesota Education Association Meeting.
- 31-Nov. 1, Thursday and Friday—Comprehensive Examinations given.

NOVEMBER

- 7, Thursday through Friday, Nov. 15—Applications for Graduation and Certificates of Readiness due for Winter Quarter.
- 7, Thursday—Applications for Graduation close for Fall Quarter.
- 19, Tuesday—A mark of "E" will be recorded for courses dropped after this date.
- 27, Wednesday noon through Sunday, December 1—Thanksgiving recess.

DECEMBER

- 2, Monday—Classes resume.
- 20, Friday—Official closing of Fall Quarter at 5 p.m.

WINTER QUARTER 1964**JANUARY**

- 6, Monday—Registration, check-out, pay fees.
- 7, Tuesday—Classes begin. Late fee of \$5 added to registration fee, cumulative at the rate of \$2 each additional day through January 13. Penalty of \$1 added for each change in registered schedule.
- 13, Monday—Registration and additions to schedules end. Fee payments not accepted after this date.
- 13, Monday—Applications due for Spring Quarter Student Teaching assignments.
- 24, Friday—Applications for Comprehensive Examinations due in Academic Dean's Office.
- 27, Monday through Thursday, February 6—Entrance Test Battery. Reservations made at Student Personnel Office.
- 31, Friday—Preregistration instructions posted in College Chronicle.

FEBRUARY

- 6, Thursday and Friday—Comprehensive Examinations given.
- 10, Monday through Friday, May 21—Applications for Graduation and Certificates of Readiness due for Spring Quarter.
- 10, Monday—Applications for Winter Quarter Graduation close.
- 25, Tuesday—A mark of "E" will be recorded for courses dropped after this date.

MARCH

- 20, Friday—Official closing of Winter Quarter, 5 p.m.
- 23, Monday through Sunday, March 29—Easter recess.

SPRING QUARTER 1964**MARCH**

- 30, Monday—Registration, check-out, pay fees.
- 31, Tuesday—Classes begin. Late fee of \$5 added to registration fee, cumulative at the rate of \$2 each additional day through April 6. Penalty of \$1 charged for each change in registered schedule.

APRIL

- 6, Monday—Registration and additions to schedules end.
- 6, Monday—Applications due for Fall Quarter Student Teaching assignments.
- 10, Friday—Applications for Comprehensive Examinations due in Academic Dean's Office.
- 20, Monday through Thursday, April 30—Entrance test battery. Reservations made at Student Personnel Office.
- 24, Friday—Preregistration instructions posted in College Chronicle.

MAY

- 4, Monday through Friday, May 15—Applications for Graduation and Certificates of Readiness for Summer Sessions and Fall Quarter due.
- 4, Monday—Applications for Spring Quarter Graduation close.
- 7-8, Thursday and Friday—Comprehensive Examinations given.
- 19, Tuesday—A mark of "E" will be recorded for courses dropped after this date.

JUNE

- 12, Friday—Official closing of Spring Quarter at 5 p.m.

FIRST SUMMER SESSION 1964**JUNE**

- 15, Monday—Registration, check-out and pay fees.

- 16, Tuesday—Classes begin. Late fee of \$5 added to registration fee, cumulative at the rate of \$2 each additional day through June 22. Penalty of \$1 added for each change in registered schedule.
- 22, Monday—Registration and additions to schedules end. First Summer Session fees not accepted after this date.
- 23, Tuesday—Preregistration and fee payment for Second Summer Session and also for Fall Quarter.
- 26, Friday—Graduation applications close for First Session.
- 26, Friday—Applications for Comprehensive Examinations due in Academic Dean's Office.
- 29, Monday through Wednesday, July 8—Entrance test battery. Reservations made at Student Personnel Office.

JULY

- 7, Tuesday—A mark of "E" recorded for courses dropped after this date.
- 17, Friday—Official closing of First Summer Session, 5 p.m.

SECOND SUMMER SESSION 1964

JULY

- 20, Monday—Registration, check-out and pay fees.
- 21, Tuesday—Classes begin. Late fee of \$5 added to registration fee, cumulative at the rate of \$2 each additional day through July 27. Penalty of \$1 added for each change in registered schedule.
- 27, Monday—Registration and additions to schedules end. Second Summer Session fees not accepted after this date.
- 28, Tuesday—Preregistration and fee payment resumes for Fall Quarter.
- 31, Friday—Graduation applications close for Second Session.
- 31, Friday—Applications for Comprehensive Examinations due in Academic Dean's Office.

AUGUST

- 3, Monday through Thursday, August 13—Entrance test battery. Reservations made at Student Personnel Office.
- 11, Tuesday—A mark of "E" recorded for courses dropped after this date.
- 23, Friday—Official closing of Second Summer Session at 5 p.m.

FALL QUARTER 1964

SEPTEMBER

- 20, Sunday—Residence halls open at 1 p.m. for occupancy for Fall Quarter.
- 20, Sunday through Tuesday, September 22—New Student Orientation (transfer and Freshmen).
- 20, Sunday—4 p.m. Convocation for all new students A-L in Stewart Hall Auditorium.
- 20, Sunday—7 p.m. Convocation for all new students M-Z in Stewart Hall Auditorium.
- 21, Monday and Tuesday—Registration, check out, pay fees.
- 21, Monday—Faculty Day. General and special meetings beginning at 8:30 a.m.
- 23, Wednesday—Classes begin. Late fee of \$5 added to registration fee, cumulative at the rate of \$2 each additional day through September 29. Penalty of \$1 added for each change in registered schedule.
- 28, Monday—Applications due for Winter Quarter Student Teaching assignments.
- 29, Tuesday—Registration and change of course privilege ends. Fee payments not accepted after this date.

OCTOBER

- 2, Friday—Applications for Comprehensive Examinations due in Academic Dean's Office.
- 5, Monday through Thursday, October 15—Entrance test battery. Reservations made at Student Personnel Office.

- 9, Friday—Preregistration instructions posted in College Chronicle.
- 22-23, Thursday and Friday—Minnesota Education Association Meeting.
- 29-30, Thursday and Friday—Comprehensive Examinations given.

NOVEMBER

- 4, Wednesday through Tuesday, November 17—Applications for Graduation and Certificates of Readiness due for Winter Quarter.
- 4, Wednesday—Applications for Graduation close for Fall Quarter.
- 18, Wednesday—A mark of "E" will be recorded for courses dropped after this date.
- 25, Wednesday noon through Sunday, November 28—Thanksgiving recess.
- 30, Monday—Classes resume.

DECEMBER

- 18, Friday—Official closing of Fall Quarter at 5 p.m.

WINTER QUARTER 1965**JANUARY**

- 4, Monday—Registration, check-out, pay fees.
- 5, Tuesday—Classes begin. Late fee of \$5 added to registration fee, cumulative at the rate of \$2 each additional day through January 11. Penalty of \$1 added for each change in registered schedule.
- 11, Monday—Registration and additions to schedules end. Fee payments not accepted after this date.
- 11, Monday—Applications due for Spring Quarter Student Teaching assignments.
- 22, Friday—Applications for Comprehensive Examinations due in Academic Dean's Office.
- 25, Monday through Thursday, February 4—Entrance Test battery. Reservations made at Student Personnel Office.
- 29, Friday—Preregistration instructions posted in College Chronicle.

FEBRUARY

- 4, Thursday and Friday—Comprehensive Examinations given.
- 8, Monday through Friday, February 19—Applications for Graduation and Certificates of Readiness due for Spring Quarter.
- 8, Monday—Applications for Winter Quarter Graduation close.
- 23, Tuesday—A mark of "E" will be recorded for courses dropped after this date.

MARCH

- 19, Friday—Official closing of Winter Quarter, 5 p.m.

SPRING QUARTER 1965**MARCH**

- 24, Wednesday—Registration, check-out, pay fees.
- 25, Thursday—Classes begin. Late fee of \$5 added to registration fee, cumulative at the rate of \$2 each additional day through Wednesday, March 31. Penalty of \$1 charged for each change in registered schedule.
- 29, Monday—Applications due for Fall Quarter Student Teaching assignments.
- 31, Wednesday—Registration and additions to schedules end.

APRIL

- 2, Friday—Applications for Comprehensive Examinations due in Academic Dean's Office.
- 16, Friday through Monday, April 19—Easter Recess.
- 20, Tuesday—Classes resume.
- 23, Friday—Preregistration instructions posted in College Chronicle.
- 26, Monday through Thursday, May 6—Entrance test battery. Reservations made at Student Personnel Office.

MAY

- 13, Monday through Friday, May 14—Applications for Graduation and Certificates of Readiness for Summer Sessions and Fall Quarter due.
- 13, Monday—Applications for Spring Quarter Graduation close.
- 6-7, Thursday and Friday—Comprehensive Examinations given.
- 18, Tuesday—A mark of "E" will be recorded for courses dropped after this date.

JUNE

- 11, Friday—Official closing of Spring Quarter at 5 p.m.

FIRST SUMMER SESSION 1965**JUNE**

- 14, Monday—Registration, check-out and pay fees.
- 15, Tuesday—Classes begin. Late fee of \$5 added to registration fee, cumulative at the rate of \$2 each additional day through June 21. Penalty of \$1 added to each change in registered schedule.
- 21, Monday—Registration and additions to schedules end. First Summer Session fees not accepted after this date.
- 22, Tuesday—Preregistration and fee payment resumes for Second Summer Session and also for Fall Quarter.
- 25, Friday—Graduation applications close for First Session.
- 25, Friday—Applications for Comprehensive Examinations due in Academic Dean's Office.
- 28, Monday through Wednesday, July 7—Entrance test battery. Reservations made at Student Personnel Office.

JULY

- 6, Tuesday—A mark of "E" recorded for courses dropped after this date.
- 16, Friday—Official closing of First Summer Session, 5 p.m.

SECOND SUMMER SESSION 1965**JULY**

- 19, Monday—Registration, check-out and pay fees.
- 20, Tuesday—Classes begin. Late fee of \$5 added to registration fee, cumulative at the rate of \$2 each additional day through July 26. Penalty of \$1 added for each change in registered schedule.
- 26, Monday—Registration and additions to schedules end. Second Summer Session fees not accepted after this date.
- 27, Tuesday—Preregistration and fee payment resumes for Fall Quarter.
- 30, Friday—Graduation applications close for Second Session.
- 30, Friday—Applications for Comprehensive Examinations due in Academic Dean's Office.

AUGUST

- 2, Monday through Thursday, August 13—Entrance test battery. Reservations made at Student Personnel Office.
- 10, Wednesday—A mark of "E" recorded for courses dropped after this date.
- 20, Friday—Official closing of Second Summer Session at 5 p.m.

St. Cloud State College . . .

was founded on the belief that a democratic society depends for its success upon the ability of education to create an enlightened electorate and a wise leadership.

has the responsibility to provide continuing opportunity for able students to develop to the highest capacity the qualities needed to live informed, intelligent and integrated lives.

has recognized the individual needs, interests, and abilities of its students by offering a variety of curriculums designed to meet such differences and to prepare the graduate for his future opportunities and obligations.

has grown from the Third State Normal School to a multi-purpose college which provides a program of general education and numerous programs of specialization for professional and vocational goals.

To meet these responsibilities and needs St. Cloud State College offers:

BACHELOR OF SCIENCE degree programs related to teaching in all areas of elementary and secondary education.

BACHELOR OF SCIENCE degree in Medical Technology.

BACHELOR OF ARTS degrees which include liberal arts or specialized fields.

MASTER OF SCIENCE IN EDUCATION programs for graduate work in Education.

MASTER OF SCIENCE IN REHABILITATION COUNSELING.

ASSOCIATE IN ARTS degrees for two years of general or specialized programs.

PRE-PROFESSIONAL programs to prepare students for advanced technical study at other colleges and universities.

ACADEMIC INFORMATION

ADMISSION AND REGISTRATION

ADMISSION OF HIGH SCHOOL STUDENTS

Graduates of accredited high schools are admitted by the college upon receipt of a Minnesota College Admission Form, an official transcript of high school credits, the scores of the American College Testing Program Examination, and a physical examination report by a physician on the College Health Examination Report Form. Students who have not taken the ACT examinations will be charged \$4 by the college for the administration of this examination.

Graduates of non-accredited high schools are admitted upon the successful completion of examinations by the College or by the chief state school authorities of the state in which the high school is located.

To encourage early planning for college, St. Cloud will grant provisional admission to seniors in accredited Minnesota high schools. A Minnesota College Admission Form should be submitted by the high school during the student's last semester containing all the available information on the student to date. After graduation of the student the high school must submit supplementary information relevant to the student's final performance and certification of his graduation. Registration of such applicants will await official graduation from high school.

HIGH SCHOOL EQUIVALENCE ADMISSION

Adults over the age of 21 may be admitted to St. Cloud State College upon successful completion of examinations administered by the College.

ADMISSION OF TRANSFER STUDENTS

Transfer students need to submit an Application For Admission and provide official copies of transcripts from all institutions previously attended. Transfer students will be admitted to the college if they previously attended institutions of higher learning accredited by the National Council For Accreditation Of Teacher Education, or by the North Central Association Of Colleges And Secondary Schools, or a comparable regional accrediting association, and if they were honorably dismissed by the institution granting previous admission.

Credits averaging a grade of C or better and earned in accredited institutions of higher learning are accepted toward graduation so far as they fit into the curriculum which the student selects. Credits earned in unaccredited institutions of higher learning may be accepted when the student has completed one year's work in residence with at least average scholarship standing.

Transfer students who were dismissed from an institution for academic reasons are not eligible for admission to this college until eligible for readmission to the previous institution, or they may become eligible for admission twelve months after their dismissal from the other institution.

Students transferring from a General College of the University of Minnesota will be admitted to the college on a conditional admission basis. The student must earn a C average during his first quarter in residence or face academic dismissal. Only grades of C or better will be transferred to this college from the General College.

Students transferring from Junior Colleges shall be required to take a minimum of 96 quarter hours in order to graduate with the bachelor's degree.

High School Teacher Training Department students who have completed one year of this type of training in a Minnesota high school, or a similar type one year teacher education program in another state after graduation from an accredited four-year high school, will be allowed 48 quarter hours of transfer credit. No re-evaluation of a student's record will be made if the student has already used the transfer credit in completing one of the college curriculums before May 12, 1952. A Minnesota high school teacher training graduate planning to take a four-year education program may receive credit for the following courses: Speech 161, 4; Geography 171, 4; Health Education 115, 2; History 141, 4; Physical Education, 1; Psychology 121, 4; Chemistry 102 or Physics 103, 4; Social Science 104, 4; Education 312, 4; Teaching, 4; Teacher Training Electives, 13.

TIME OF ENTRANCE

Students may enter at the beginning of the fall, winter, or spring quarter, or at the beginning of either summer session. Students are urged to make application well in advance of the time they wish to enroll. Freshman applying for admission are required to submit the Minnesota College Admission Form or its equivalent which may be obtained at any Minnesota high school. Transfer students need to submit the Application for Admission With Advanced Standing which may be obtained by writing the Registrar's Office.

PRE-REGISTRATION

St. Cloud State encourages all students, both new and former, to take advantage of the opportunities offered in preregistration. Preregistration is the process of arranging a program of classes well in advance of the quarter for which the student wishes to be enrolled. A new student may preregister for a particular quarter by checking the designated dates in the College Calendar and by making an appointment with the Registrar's Office within the period indicated.

REGULAR REGISTRATION

The regular registration period for each quarter is indicated in the College Calendar. All former students are required to have their class schedule approved by their faculty advisers before reporting to the Registrar's Office for programming. All new students should report directly to the Registrar's Office for instructions. Regular registration period should only be considered if it is absolutely impossible for the student to report for preregistration.

LATE REGISTRATION

Any registration which is completed after the beginning of classes is considered late, and thereby penalized by the addition of \$5 the first day accumulative at the rate of \$2 for each of the succeeding four class days of a regular quarter or summer session. Registrations through the tenth class day may be permitted in exceptional cases by clearing with the Registrar. These registrations would be subject to the late registration fee accumulating at the rate of \$2 per day.

EVENING AND OFF-CAMPUS REGISTRATION

Evening and Off-Campus registration takes place during the first and second class meetings. If the registration takes place after the period of time allotted at the first meeting a penalty fee of \$5 is added to the registration fee. Off-campus registration material must be mailed and postmarked within 24 hours after the second class meeting to be acceptable. Any material bearing a postmark after this date will be refused.

SCHOLARSHIP STANDARDS

MARKING SYSTEM

The academic achievement of students is recorded by the following system of marks: **A**, excellent; **B**, very good; **C**, average; **D**, passing; and **E**, failing. The mark of **X** is given during the early quarter or quarters of a course which must be taken in a series of more than one quarter or sessions before any credit is earned. **S** means satisfactory performance in courses for which no more precise mark is generally available. **U** means unsatisfactory. Courses not completed during the regularly scheduled period will be recorded as "**I**" for Incomplete—such Incompletes must be removed by students within one calendar year in order to receive credit for the course. For auditing the mark recorded will be "**V**." "**WS**" means withdrawn satisfactory; "**WU**," withdrawn unsatisfactory. After the two-thirds point of the quarter or session (as shown precisely in the College Calendar) any withdrawal will be recorded "**E**." Students who register for a course but do not attend the class and/or do not withdraw officially will be given a mark of "**E**."

HONOR POINTS

The following system of honor points is used in all courses and curriculums; a mark of **A**, 4 points per quarter hour of credit; **B**, 3 points; **C**, 2 points; **D**, 1 point; **E**, no honor points per quarter hour.

COMPUTING HONOR POINT RATIO

A student's honor point ratio is a numerical ratio of the total credits attempted and the total honor points received. The following are examples of the method of computing honor point ratios:

- A. A student who completes 16 quarter hours credit with 16 hours of C has earned 32 honor points. His honor point ratio is $32 \div 16 = 2.0$.
- B. A student who completes 16 quarter hours of credit with 8 hours of C and 8 hours of D has earned 24 honor points. His honor point ratio is $24 \div 16 = 1.5$.

Credits earned in courses in which the mark of "S" is given are not included in the computation of honor point ratio.

Only courses taken at St. Cloud State College are used in computing honor point ratio.

When a course is repeated by a student, only the new credits and the new marks are included in the computation of honor point ratio.

Marks of "I," (Incomplete); "X," (In Progress); "V," (Auditor); "WS," (Withdrawn Satisfactory); "WU," (Withdrawn Unsatisfactory) do not represent credit earned and are not included in the computation of honor point ratio. When a mark of "E" is earned, the credit hours attempted are included in the computation of honor point ratio.

ACADEMIC DEFICIENCIES AND SELECTIVE RETENTION

When a student fails to maintain a "C" average for any given quarter, his academic work for that quarter is unsatisfactory. Whenever a student's cumulative honor point ratio is less than **2.0** ("C" average) he is scholastically unsatisfactory.

Students whose records show an honor point ratio of **1.50 or less** after two quarters become eligible for dismissal.

Students whose records show an honor point ratio of **1.90** any time after five quarters become eligible for dismissal.

A student who becomes eligible for dismissal due to low scholarship may be granted a trial quarter. Conditions for that trial quarter are stipulated by the Admissions and Retention Committee. If the student fails to meet the conditions of that trial quarter he shall not be eligible to re-enroll at the college for a period of one calendar year. After that period he may apply to the Admissions and Retention Committee in writing for another trial quarter. Failure to satisfactorily complete a second trial quarter will result in permanent dismissal.

Any transfer student admitted to the College who was academically deficient at the time of his withdrawal from the previous institution attended is automatically placed on trial at this College and the above regulations concerning the trial quarter apply thereafter.

If a prospective student has been refused readmittance for any reason by the institution he previously attended, he is ineligible for admission to this institution, except as follows: He may make application in writing to the Admissions and Retention Committee and be prepared to present his case in person to this Committee if requested. The Committee will consider each case on its individual merits, and either grant or deny admission as a result thereof. Terms of admission may be stipulated.

The College reserves the right to recommend for dismissal a student whose personal qualities, general health, scholastic achievement, conduct, or other standards are such that continued enrollment would not be in the best interests of the College and the student.

ACADEMIC POLICIES

PREREQUISITES

A student who fails in the first course of a sequence cannot take the following courses in that sequence until he has made up the failure. Prerequisites for a course, as stated in this **Bulletin**, must be met before the course is taken unless written permission to omit the prerequisites is obtained from the department chairmen concerned and approved by the Academic Dean.

STUDENT LOAD

The normal quarterly load for students is 16-18 hours. Permission to carry

more than this amount of load shall be granted by the Academic Dean only in exceptional cases, or to those students whose cumulative honor point ratio is 3.0 (B average) or better. A student shall not be allowed to carry in excess of 20 quarter hours during any one quarter. During the summer session, the normal load is 8 quarter hours. A student shall not be allowed to carry in excess of 10 quarter hours in any one summer session. A student's load is figured on the total of all courses carried, including correspondence, extension, or other college's courses taken concurrently with those at St. Cloud State College.

CLASS ATTENDANCE

Students must begin attending classes at the outset of the quarter or session. St. Cloud has NO provision for "cuts" or for late entrants. Arrangements for all absences must be made with the individual instructor involved. Each faculty member keeps a record of class attendance. Attendance at classes without payment of fees, even though other registration steps may have been taken, is expressly forbidden, and instructors are not permitted to allow students to attend who cannot show evidence of completed registration for the class.

AUDITING OF COURSES

A student who wishes to audit courses must obtain permission of the instructor of the class which he wishes to audit and from the Registrar's Office. The same registration procedure is followed and the same fees charged as for credit courses. Auditors must attend class but the taking of quizzes and examinations is optional. Courses audited cannot be counted toward meeting graduation requirements. Courses audited are counted as part of the student load.

COMPREHENSIVE EXAMINATIONS

Credit by comprehensive examination is offered by this College for all freshman and sophomore (100 and 200 level) general education courses. The purpose of these offerings is to promote scholarship and to save time of highly qualified students. The maximum number of credits which any student may earn by comprehensive examination is 48 quarter hours or the equivalent of one academic year. (A fee of \$5.00 must be paid for each examination taken.) Students interested in this opportunity should check with the Director of the program in the Academic Dean's Office.

REPEATING COURSES

A student may repeat **one time** any course which he failed, in which he received a "D" grade, or in which he received a "WU" mark. When courses have been repeated, both the old and new grades will appear on his record; but only the last grade earned will be used in determining his honor point ratio.

CHANGE OF CLASS

A student is not permitted to change subjects or to add subjects to his class schedule after the fifth day of a quarter during the school year or after the fifth day of classes during a summer session. A student may not change, add or drop a course without the written approval of the instructor and adviser. No course may be dropped after two-thirds of the quarter. All class changes require the completion of a "Drop and Add" form, which is secured in the Registrar's Office.

RESIDENCE REQUIREMENT

Residence credit is credit earned on the campus of St. Cloud State College. To be eligible for graduation from this college under a four-year curriculum a student must have been in residence at least three quarters and must have earned at least 45 quarter hours of credit at this college in residence during his last two college years. Eight of these credits must be earned in residence during the quarter immediately preceding graduation. The Academic Dean is authorized to permit a student who lacks four or less credits of graduation, and who has a good scholastic record, to complete his degree requirements in a manner to be prescribed by the Academic Dean.

Transfer students are required to take at least 12 quarter hours in their major field and 8 hours in their minor fields in residence unless waived by the department. A student transferring from a Junior College must take a minimum of 96 quarter hours in addition to credits earned at the Junior College.

Any student must be enrolled for credit in the college during the quarter in which he completes the requirements for graduation.

CORRESPONDENCE, EXTENSION, WORKSHOP OR FIELD TRIP CREDIT

A maximum of 15 quarter hours of correspondence credit may be used toward a bachelor's degree.

Extension credit may be transferred toward graduation only from those institutions accredited to give extension courses.

No more than 8 quarter hours credit in either workshop or field trips (tours) may be applied to a major and no more than 4 quarter hours of such credit may be applied to a minor. No more than 16 quarter hours credit total may be applied on any curriculum of a combination of workshop and field trips. This 16 quarter hours credit cannot be earned exclusively in either workshop or field trips.

MAJOR PROGRAM OF STUDY

All students who expect to become candidates for the bachelor's degree must, when their completed credits equal or exceed 48 quarter hours, make application for admission to a major program of study. Application blanks may be secured in the Academic Dean's Office. Courses numbered in the 300 or higher series may not be taken by any person who lacks Admission to a Major Program of Study.

Transfer students who transfer more than 48 quarter hours must make application after completing 16 quarter hours of credit; others when their total credits equal or exceed 48.

Transfer students may enroll in 300 or 400 courses their first two registrations without being admitted to a Major Program of Study if the courses are necessary at this time.

Final disposition of an application for Admission to Major Program of Study shall be determined by the Dean of Academic Administration.

ADMISSION TO TEACHER EDUCATION

All students preparing to teach must make application for admission to Teacher Education. This must be done as soon as the student receives notification of admission to a major program. Before the student will be admitted to Teacher Education he must do the following things:

1. Present his notification of admission to Major Program in the Teacher Education Office, Room 107 SH.
2. Complete and sign the application form.
3. Take the tests listed on the application form.
4. File the plan of his academic program for each quarter through student teaching with the Teacher Education office.

Students must have a 2.25 grade point average in their major(s) and 2.00 in their minor(s), communication courses, and over-all at the time of admission to Teacher Education.

In cases where there is a question regarding a student's eligibility for Teacher Education for reasons other than his grade point average, he will be interviewed by a faculty committee.

Students will not be permitted to take courses in the professional education core until they have been admitted.

Normally it will take two quarters from the time the student applies until he is admitted to Teacher Education so that a student should apply as soon as he is eligible.

ADMISSION TO STUDENT TEACHING

A student must submit his application to the director of student teaching by the end of the second week of the quarter preceding the quarter he plans to student teach. His application will be approved if he meets the basic requirements of general fitness for teaching and the following requirements of scholarship which are effective Fall, 1963:

1. General Scholarship — 2.00
2. Communication courses — 2.00
3. Major field — 2.25
4. Minor field — 2.00
5. Professional Education Core — no grade of less than "C".
6. Health Examination

The college reserves the right to deny student teaching to a student whose personal qualities, general health, scholastic achievement, conduct, or other standards are such that student teaching would not be in the best interests of the college and the student.

WITHDRAWAL FROM COLLEGE

Students withdrawing officially from the College should report to the Office of Student Personnel for instructions on procedure. Withdrawal without proper application during a quarter will result in failing grades.

GRADUATION

Under the authority of the State College Board, St. Cloud State College awards the degree of Master of Science in Education, Bachelor of Science, Bachelor of Arts, and Associate in Arts. A total of 192 quarter hours of credit is required for any four-year degree.

Candidates for a Bachelor of Science degree in education must meet the following academic standards, which become effective Fall, 1963, in order to qualify for graduation:

1. General scholarship — 2.00
2. Communication courses — 2.00
3. Major field — 2.25
4. Minor field — 2.00
5. Professional Education Core — 2.25
6. Health Examination

Candidates for a Bachelor of Science in Medical Technology or Bachelor of Arts degrees must meet the following academic standards to qualify for graduation:

1. General scholarship — 2.00
2. Communication courses — 2.00
3. Major and Minor field — 2.00
4. Health examination.

Application for graduation forms are obtained in the Registrar's Office. Check the College Calendar for the due date in any specific quarter.

HONORS

Each student who completes a degree curriculum with an honor point ratio of at least 3.00 but less than 3.50 is graduated with "Scholastic Honors." Each student with an honor point ratio of at least 3.50 is graduated with "High Scholastic Honors."

COST OF ATTENDANCE, FINANCIAL AID, AND SCHOLARSHIPS

COST OF ATTENDANCE

TUITION

Following is the schedule of tuition charges for the Minnesota State Colleges:

ON CAMPUS COURSES:

Fall, Winter, or Spring Quarters

Undergraduate:

Residents\$3.50 per credit hour

Non-residents\$5.50 per credit hour

Graduate:

Residents\$5.00 per credit hour

Non-residents\$7.50 per credit hour

Summer Sessions:

Undergraduate:

Residents\$4.50 per credit hour

Non-residents\$5.50 per credit hour

Graduate:

Residents\$5.00 per credit hour

Non-residents\$7.50 per credit hour

OFF CAMPUS COURSES:

All students—graduate or undergraduate, resident or non-resident, regular school year or summer session.....\$7.50 per credit hour

Minimum tuition of any credit-granting course of instruction..\$15.00

STUDENT ACTIVITY FEE

If an undergraduate student takes 9 or more quarter hours during a quarter, he is required to pay the Student Activity fee and the Student Union Fee.

If a graduate student takes 7 or more quarter hours of work during a quarter, he is required to pay the Student Activity Fee and the Student Union Fee.

The Student Activity Fee is a quarterly fee of \$10 and a fee of \$5 for each summer session. This covers tickets of admission to lectures, concerts, plays, and athletic contests. The fee also is used to pay for health service, the college paper, the student directory, and all college social and recreational activities. Part of the expense of the college yearbook, Talahi, is covered by this fund.

The Student Union Fee is a quarterly fee of \$5 and a fee of \$2.50 for each summer session.

SUMMARY OF EXPENSES

Board and room per quarter, Residence Halls.....\$220

Tuition per quarter (16 credit hours, resident)..... 56

Student Activity Fee, per quarter..... 10

Student Union Fee, per quarter..... 5

Total (average student)\$291

Special Fees

*Lessons in Orchestral Instruments, per quarter.....\$ 15

Lessons in Organ, per quarter..... 20

*Lessons in Piano, per quarter..... 15

*Lessons in Voice, per quarter..... 15

Towel service for Physical Education courses..... 1

All tuition and fees must be paid in person at the Business Office. Payment of fees by mail, with the exception of Off-Campus classes, will not be accepted.

*No fees charged music majors and minors for required credits.

REFUND OF TUITION AND FEES

On-Campus Classes:

No partial refunds will be made for courses dropped by a student unless he withdraws officially from the whole of his course work. If complete withdrawal and check-out is carried out with the knowledge and consent of the Student Personnel Office during the first week of classes of the fall, winter, or spring quarter, 80 per cent of the fees will be returned. During the second week of classes, 60 per cent; third week, 40 per cent; fourth week, 20 per cent; thereafter, no refund will be made. In the summer sessions, a 60 per cent refund will be made upon withdrawal in good order during the first five days of classes; 20 per cent during the second five days of classes; thereafter no refund of fees will be made.

Off-Campus Classes:

In the case of off-campus and evening classes there will be a refund from the first through the completion of the fourth class session of 50 per cent. Following the fourth class session, no refund will be made.

RECEIPTED FEE STATEMENT

After paying his fees, each student should carry with him the receipted fee statement for the entire quarter. It is needed for identification, for library use, showing completed registrations, admission to college events, and in transactions concerning locker and towel services.

FINANCIAL AID

LOANS

Emergency Loans. Emergency loans are granted to students who are financially needy, have a satisfactory scholastic record (at least a "C" average), have a record of personal and financial responsibility, and have been in residence at this college for at least one quarter. A student may borrow up to \$100, and a loan is normally due within one year. The interest rate is 4 per cent per annum. A student interested in negotiating an emergency loan should see the Financial Aid Adviser in 108 Stewart Hall.

National Defense Student Loans. The National Defense Education Act of 1958 established a new program of long-term loans to college students. The purpose of the act is to provide needy youths an opportunity to acquire a complete college education. Prospective students as well as full-time currently enrolled students are eligible to apply, providing they can show evidence of strong financial need and aptitude for college academic work.

The maximum National Defense Student Loan permissible per year at St. Cloud State College is \$1,000. Repayment on the loan will normally begin one year following graduation or withdrawal from college and be completed within ten years.

Further information and application forms may be obtained from the Student Personnel Office, 108 Stewart Hall.

United Student Aid Fund. For those who cannot qualify for the National Defense Loans, there is now the possibility of borrowing up to \$1,000 per year for all but the freshman year. The loan is made through the home town bank provided it is affiliated with the United Student Aid Fund. The rate of interest is 6 per cent common interest and the loan must be repaid within three years of graduation. For further details see your local bank or contact Mr. Weismann.

VETERANS' BENEFITS

The College has been approved for training veterans from the Korean affair under Public Laws 550 and 894. Veterans should apply for benefits early so that approval will be confirmed before the veteran enrolls. Application may be made at any veterans service office or with the Director of Veterans Affairs, 108 Stewart Hall.

The Director of Veterans Affairs is the veterans' consultant on the campus. All Certificates of Eligibility and Entitlement are processed in his office, 108. He is in a position to help veterans with subsistence, credits, loans, and other problems.

The War Orphans Education Program, Public Law 634, is also handled by the Director of Veterans Affairs. Application may be made through him or any veterans service officer for these benefits.

SCHOLARSHIPS AND AWARDS

Application for Scholarships. In February of each year detailed scholarship information and application forms are sent to principals and counselors in the high schools of central Minnesota. In addition interested students may write to the Chairman of the Scholarship Committee, St. Cloud State College, and request a scholarship application form. Because the deadline for applying is March 15, request for application blanks should be made by February 15.

Scholarships for Prospective Students. Each spring, usually early in May, the following scholarships are awarded to students who plan to enter St. Cloud State College. Awards are made on the basis of scholastic achievement, financial need, general character, and leadership.

ALUMNI ASSOCIATION SCHOLARSHIPS. \$150.

ATWOOD MEMORIAL SCHOLARSHIPS. \$200.

CLARENCE L. ATWOOD SCHOLARSHIPS. \$100. For students who plan to enter the teaching profession.

DELTA KAPPA GAMMA SCHOLARSHIP. For St. Cloud high school graduating senior women who plan to enter the teaching profession.

PHILLIP L. HALENBECK SCHOLARSHIPS. \$200.

KIWANIS TEACHER EDUCATION SCHOLARSHIPS. \$50. For St. Cloud high school graduating seniors who plan to enter the teaching profession.

SPEECH SCHOLARSHIPS. Vary from \$150 to \$250. For high school seniors who apply for the scholarship and demonstrate their competence in the annual Speech Festival held at St. Cloud State College. The applicant must have completed a one-semester high school course in speech and must have participated in speech activities. Only one senior may apply from each high school.

VIOLA S. THOMPSON SCHOLARSHIP. \$150. For women students who plan to enter the teaching profession. (Sponsored by Alpha Delta Kappa, national honorary teachers sorority).

ZONTA CLUB SCHOLARSHIPS. \$150. For St. Cloud high school graduating senior women.

Scholarships and Awards for Currently Enrolled Students. Each spring the following scholarships and awards are granted to students who are currently enrolled in the college. Awards are made on the basis of scholastic achievement, financial need, general character, and leadership.

ALICE M. EASTMAN AWARD

GAMMA SIGMA SIGMA SCHOLARSHIP

KATHERINE KIMBALL EASTMAN MEMORIAL AWARD

LEE AXELL MEMORIAL SCHOLARSHIP. Sponsored by Sigma Tau Gamma.

CHI ETA PHI SCHOLARSHIP

O. J. JERDE MEMORIAL SCHOLARSHIP. Sponsored by Al Sirat fraternity.

STEPHEN H. SOMSEN AWARD

TWENTIETH CENTURY FEDERATED WOMEN'S CLUB SCHOLARSHIP

TAU KAPPA EPSILON

RETARDED CHILDREN ASSOCIATION

LINCOLN SCHOOL P. T. A.

EMPLOYMENT

There are opportunities for students who desire part-time work in return for room and board or financial remuneration. Applications for these positions should be made to the Financial Aid Adviser during August if placement is requested at the beginning of the fall quarter. Students may ask his assistance in locating work any time during the college year. The college is interested in helping all deserving students who find it necessary to earn part of their expenses. Students who are employed while attending college are required to adjust the academic load to their time and ability.

HOUSING

General—All students, under age 21, not living in parental homes must live either in Residence Halls or in College-approved homes.

RESIDENCE HALLS—WOMEN

At St. Cloud State College, all freshman women from outside the city are expected to live in the College residence halls. There are four residence halls for women: Mitchell Hall for freshman and upperclass women; Carol Hall, Whitney Hall, and Hill Halls, for freshman women. These halls provide lounges, recreation rooms, laundry facilities, kitchenettes, and sewing rooms. The College furnishes the sheets, pillow slip, and the pillow. Towels, bedspreads, and blankets are furnished by the student. The social, educational, and cultural advantages derived from living in this environment are of great value.

Mitchell Hall will accommodate 420 women, mainly in double rooms. There are a limited number of single rooms. The rooms are equipped with single beds, built-in desks and closets, study lamps, and drapes.

Whitney Hall is a home that has been converted to a residence for 30 women. The rooms are all multiple rooms. They are equipped with single and bunk beds, desks, closets, and drapes. The student rooms are all located on the second floor while the third floor has been set up as a study area.

Carol Hall is also a home that has been converted to a residence for 30 women. The majority of the rooms are multiple rooms with a limited number of double accommodations. The student rooms are located on the second and third floors. The rooms are equipped with single and bunk beds, desks, closets, and drapes.

Hill Hall will accommodate 198 women mainly in double rooms. The rooms are equipped with single beds, built-in desk and closets, study lamps, and drapes.

RESIDENCE HALLS—MEN

Shoemaker Hall will accommodate 502 students in double rooms. The rooms are equipped with single beds, built-in desks and closets, and study lamps. Sheets, pillow cases and pillows are furnished.

Lawrence Hall will accommodate 134 men in double rooms. The rooms are equipped with single beds, study desks, closets, and drapes.

RESIDENCE HALLS—GENERAL INFORMATION

To make application for space in the College residence halls, it is necessary to file an application card and a \$10 deposit with the Housing Office. Applications are not accepted more than 12 months in advance of the beginning of the session for which application is made. Remittances should be in the form of a check, draft, or money order, made payable to St. Cloud State College. The \$10 deposit does not assure a room reservation. When an application becomes eligible for assignment, a residence hall contract is sent to the applicant. It must be signed and returned immediately to hold the reservation. *The student agrees to occupy a room in the residence hall for the academic year (fall, winter, and spring quarter) unless the contract is cancelled on or before August 15 or unless the contract is terminated by the College, by student graduation, or by withdrawal from College.* A student entering the winter or spring quarter agrees to occupy a room in the residence hall for the remainder of the academic year unless the contract is cancelled three weeks prior to the beginning of the entering quarter. If notification of change of plans is received by August 15, the deposit will be refunded. If notification is received after August 15, the full amount of the deposit will be forfeited. Rooms may be occupied after 1:00 p.m. on the day preceding New Student Week of the fall quarter, and after 8:00 a.m. of the last day of regular registration of the winter, spring, and summer sessions.

Assignments are given to the applicants in order of the date the completed application and deposit are received in the Housing Office. Students who wish to reserve space in any of the halls are urged to make reservations at an early date. The residence halls are closed to students during the Minnesota Education Association Annual Meeting in the fall, Thanksgiving recess, and the quarter breaks between fall and winter quarters, and winter and spring quarters.

The current charge for board and room at all residence halls is \$230 per quarter for a single room, \$220 per quarter for a double room, and \$210 per quar-

ter for a multiple room. Payment of these charges is in advance by the month or by the quarter. No discount is made for absences. Room and board rates are subject to change by the State College Board. All business transactions such as paying for board and room are made with the College Cashier at Stewart Hall.

A student withdrawing from the College at the end of a quarter is not held responsible for subsequent quarters. A student withdrawing from college during the quarter receives a refund of board charges but is not refunded his room rent. Such a student must pay for board through the Sunday following the date of a departure.

Room without board is available for Summer Session students only at \$30 per session when two share a room and \$45 for a single room. Meals may be obtained a la carte at the College Cafeteria.

ACCOMMODATIONS IN PRIVATE HOMES FOR MEN AND WOMEN

Unmarried students must live in parental homes, college residence halls or homes approved by the college. Those who wish to live with friends or relatives other than parents must secure permission from the director of housing. The following are exempt from this policy: part-time students (enrolled for eight credits or less), students who have received a baccalaureate degree and students 21 years of age or older. For the purposes of this policy, a student's age on the first day of a quarter shall be considered to be his age for the entire quarter. Such exemption may be revoked in the event of irresponsible conduct or violation of college regulations. College regulations governing student conduct apply to all students regardless of whether they live in approved or non-approved housing.

Lists of college approved off-campus facilities are available for student use in the office of Student Personnel Services. Included in the lists are sleeping rooms and light housekeeping facilities.

College men and women are not allowed to room in the same house.

Rooms in private homes are rented for the full quarter, unless other arrangements are especially made in advance with the householder and reported in advance to the Director of Housing. Students are not permitted to change rooming or boarding places during the quarter without permission from the Director of Housing.

MARRIED STUDENTS' HOUSING

The College maintains 48 housing units, located at Selke Field. Each unit consists of living room, two bedrooms, kitchen, and bath. Married students may apply to the Director of Housing. Those with dependent children will be given preference in assigning units. Applicants will be placed on the waiting list as of the date the application and deposit are received in the Housing Office. For further information write to the Director of Housing.

STUDENT SERVICES

STUDENT PERSONNEL OFFICE

The Dean of Students, two Assistant Deans of Students, Director of Student Housing and Administrative Assistant, administer a number of programs in the interest of student welfare. The following are the major services made available in this office: on-campus and off-campus housing; cocurricular activities; loans, scholarships, and part-time employment; supervision and training of upperclass student counselors; maintenance of student personnel records; selective service and veterans affairs; orientation of new students; concerts and lectures; and counseling with students concerning many kinds of problems.

PSYCHOLOGICAL SERVICES CENTER

The Psychological Services Center is operated primarily to serve four needs. The first is to diagnose psychological and educational difficulties of elementary and high school children in the area and to suggest remedial programs to be followed. The second is to furnish a laboratory situation for students engaged in learning diagnostic and remedial procedures in reading, counseling, speech, hearing, and other areas. The third is to engage in correcting difficulties that elementary, high school, and college students are found to have in reading, personality, speech, hearing, and other areas.

School children will be admitted upon the referral of school authorities, while preschool children may be referred by parents, social workers, or other interested individuals. No charge is made for services rendered.

The fourth purpose of the Center is to assist college students in making educational, vocational, personal, or social adjustments through individual interviews or counseling services. A complete psychological test library is maintained and tests in the areas of mental ability, interests, personality, special aptitudes, and achievements are frequently used to assist in the counseling process. An educational, vocational, and personal information library is also provided.

PLACEMENT SERVICE

The Placement Service obtains accurate information concerning the character, personality, preparation, aptitudes, and experience of graduates of St. Cloud State College. Information is collected concerning graduates and is kept in a permanent, confidential file. The Service advises students to techniques of job application and informs them of vacancies. It submits in confidence to employing officials or to other institutional placement bureaus data concerning candidates and assists graduates in obtaining suitable positions. This service is available to all graduates of the college.

HEALTH SERVICE

Each entering student is required to have a physical by a physician and the report of the examination must be submitted on the standard form used by the college. A completed examination form must be received by the college prior to the opening of the student's first quarter in residence. An examination taken more than four months prior to the opening of the first quarter will not be accepted. Failure to comply with this regulation will result in withholding the student's grades and registration for the following quarter.

The Health Service provides:

1. Physical examinations for all candidates for graduation.
2. Special service in case of illness.
3. Laboratory services, such as urinalysis and hemoglobin if necessary.
4. Consultation and advisory service concerning individual health problems.
5. Health educational materials.
6. A physician in attendance, two hours daily—Monday through Friday except Wednesday—for consultation, diagnosis, and treatment.
7. Hospital and medical care only when recommended by Health Service personnel. (a) Payment up to \$150.00 per school year for hospitalization in the St. Cloud Hospital and medical care excluding eye refractions, broken glasses, pre-existing illnesses, or dental care. (b) Medical and surgical care for students injured while participating in intercollegiate athletic events.

Householders or parents should report the illness of students to the Health Service by telephone on the first day of illness and each day thereafter. If special care is needed, the nurse will make a home call. In certain cases the nurse may require that students report in person to the Health Service prior to returning to classes.

Student teachers assigned to off-campus teaching centers are given the same or equivalent medical and hospitalization service to which on-campus students are entitled. Questions concerning equivalency of service should be directed to the Health Service.

The Health Service staff includes two full-time nurses, a secretary, and a part-time physician. Medical care and first aid are provided under the direction of the physician.

BLUE CROSS-MII

A Blue Cross and MII group hospital and medical plan is available to all students enrolled for nine or more credits. The policy goes into effect October 1 for a 12-month period. Enrollment dates are at the beginning of each quarter.

ACTIVITIES AND ORGANIZATIONS

THE CONCERT AND LECTURE SERIES

The evening concert and lecture series of the college provides a variety of entertainments by nationally recognized artists in music, dance, and drama. A committee of faculty and students selects a series of programs for the regular school year and several attractions for the summer sessions. The student activity fee includes the cost of the admission to the performances for students and faculty of the college.

In the last year, attractions have included lectures by Agnes DeMille, Basil Rathbone, Charles Laughton, Paul Engel, Dr. Benjamin Fine, and Dr. Robert G. Havighurst. Concerts have been given by Don Shirley Trio, Ralph Marterie, The Marlow Twins, and the St. Cloud State College Music Concert Groups. The Annual Fine Arts Festival is held during the winter quarter of the school year.

SOCIAL ACTIVITIES

The social program, planned by a committee of faculty members and students, offers several types of entertainment to meet a variety of interests. Each quarter the program includes movies, mixers, dances, and special parties free of charge for all students. Student organizations are asked to plan the events, and faculty members act as hosts and hostesses.

STUDENT GOVERNMENT

The Student Council represents the entire college community. The purposes of the Council are to coordinate student activities on the campus, to effect a centralized student government, to promote faculty-student cooperation, to provide a training opportunity in democracy and democratic procedure, to develop leadership, and to promote good citizenship.

The Associated Women Students is an organization representing all women on St. Cloud State College campus. It is designed to promote the spirit of unity and loyalty among the women of the campus; to encourage and maintain high standards of living and scholarship; to co-operate with the college in establishing and maintaining policies and standards of conduct and housing. Its membership in the Inter-Collegiate Association of Women Students provides a channel for exchange of ideas, programs of activities, and for direct representation in a national group.

The Classes, organizations of freshman, sophomore, junior, and senior students respectively, serve to promote a feeling of class spirit and to plan class projects and entertainments.

The Inter-Religious Council furthers the interest in spiritual life of the college students. It acts as a referendum and coordinating agency to carry out the religious activities in which all of the various religious groups participate as a unit. The Council assists in making preparations for Religion-in-Life-week.

The Inter-Society Board considers matters of common interest to all of the women's societies. It acts as an authorized body to consider intersociety policies and activities, to effect a co-operative and harmonious relationship among the four societies on campus (Athenaeum, Chi Eta Phi, Sigma Gamma Phi, and Gamma Sigma Sigma); to aid in the satisfactory orientation of new women students, and to promote social and cultural interests of women students on the campus.

The Inter-Fraternity Council is similar in function to the Inter-Society Board, and consists of representatives from each of the men's fraternities.

INTERCOLLEGIATE ATHLETICS

Athletics is under the general supervision of the Intercollegiate Athletic Committee and under the immediate supervision of the Director of Athletics. The college is a member of the Northern Intercollegiate Conference, and the National Association of Intercollegiate Athletics. It is committed to tolerate only clean and wholesome activities and to promote good sportsmanship among contestants and spectators. The college is represented by intercollegiate teams in football, basketball, wrestling, hockey, track, baseball, tennis, and golf, and over a period of years it has made an excellent record in intercollegiate competition. Large squads are encouraged so that a maximum number of students may enjoy the benefits from intercollegiate competition. In addition to the varsity squad, freshman squads are maintained and trained in major sports.

INTRAMURAL SPORTS

The aim of the Intramural Program is to offer every student and faculty member opportunity to participate in some wholesome leisure-time athletic activity. Participation in intramural sports is entirely voluntary. It provides opportunities for students to increase their skills in activities with the fun of friendly competition, provides social contact with other students, and develops the spirit of cooperation and fair play.

STUDENT ORGANIZATIONS

Students are encouraged to take an intelligent and active part in a reasonable number of cocurricular activities. Each organization established on the campus has a constitution accepted by the Student Council and college administration.

The opportunities for participation cover a large area of interests and pleasure. A well-balanced student program chosen to supplement the academic training and to broaden the cultural experiences is invaluable for prospective teachers. Such training and enjoyment increases the value of a teacher's work in any community.

DEPARTMENTAL CLUBS, HONORARIES, SPECIAL INTEREST GROUPS

Arts and Letters: Forensics Association, Poster Bureau, Music Club, Radio Guild, Theatre Guild, Art Club, Parallels, Cecelians.

Business and Science: Academy of Science, Aeronautics, Business Club.

Health and Physical Education: Lettermen's Club, Women's Recreation Association, Major-Minor Club, Synchronettes Swim Club.

Religious Organizations: Baptist Student Fellowship, Christian Science Organization, Gamma Delta, Inter-Varsity Christian Fellowship, Inter-Religious Council, Lutheran Student Organization, Newman Club, United Campus Christian Fellowship, Wesley Foundation.

Scholarship and Education: Association of Childhood Education, Chi Sigma Chi (Industrial Arts honorary), Student National Education Association, Sigma Alpha Eta (Speech), Kappa Delta Pi (Education honorary), Kappa Pi (Art Honorary), Photozeteans (Coed Honorary), Pi Omega Pi (Business honorary), Tau Kappa Alpha (Forensic honorary), International Relations Club, Industrial Education Club, College Hosts.

Social Science: Young Democrats, Young Republicans, SPAN, Economics Club.

Social Organizations: Al Sirat, Sigma Tau Gamma, Phi Sigma Epsilon, Tau Kappa Epsilon, Alpha Phi Omega (local men's fraternity), Athenaeum, Chi Eta Phi, Sigma Gamma Phi, Gamma Sigma Sigma, Diota (Women's societies).

Special Interest Groups: Chess Club, Cheerleaders, Ski Club, Rangers Club, Photographers, Film Society, Die Deutsche Gessellschaft.

STUDENT PUBLICATIONS

The College Chronicle, the weekly student newspaper, is distributed every Friday. In recent years the Chronicle has won both All-American rating from the Associated Collegiate Press and the Medalist rating from the Columbia Scholastic Press Association. The Chronicle has a program of scholarships for those in key editorial positions.

The Talahi is the college yearbook published by the students. Its purpose is to record the activities of each college year and to give training to students interested in the production of yearbooks. The Talahi has a program of scholarships for those in key editorial positions.

The Student Handbook presents basic information about the college—its history, organization, academic and conduct regulations, student services, and student activities.

The College Directory is a publication including the names, home towns, college addresses, and telephone and post office box numbers of students. Office numbers, extension numbers, and home addresses and phone number are given for all members of the college faculty and staff.

HISTORY OF ST. CLOUD STATE COLLEGE

The institution which is now St. Cloud State College first opened its doors as the Third State Normal School in September 1869. The first building was the old Stearns House, a hotel which was purchased by the State Legislature for \$3,000 and was remodeled for use as a school. Classrooms for the Normal School were on the first floor, classrooms for the "Model School" were on the second floor, and a girls' dormitory was on the third. The original faculty consisted of Principal Ira Moore and four assistants; the student body included 42 young women and 11 young men. In the 92 years since this modest beginning, the school has developed into a college of established reputation with a physical plant valued roughly at \$14 million and a faculty of 172 members.

This development from normal school to college follows closely the pattern of development of similar state institutions throughout the country. Until 1898 the St. Cloud Normal School was essentially a secondary school with a few students of college grade. From 1898 on, the Normal School began offering a full junior college curriculum, and in 1914 the high school phase of the program was dropped. In 1921 the college was authorized by the State Legislature to adopt the name of St. Cloud State Teachers College, and in 1925 it was authorized to grant the four-year degree, Bachelor of Education. The name of this degree was changed to Bachelor of Science in 1940. The 1953 State Legislature authorized the College to grant the graduate degree, Master of Science in Education.

Although the college remains primarily a teacher preparing institution, authorization was given in 1946 to grant the Bachelor of Arts degree to students completing a four-year general education course. Following the same pattern, a two-year Associate in Arts degree in general or pre-professional education was authorized in 1948. The State Department of Education gradually raised its standards of certification, and in 1961 the minimum requirements for teacher certification became four years.

St. Cloud State College is a member of the American Council on Education, the American Association of Colleges for Teacher Education, and the North Central Association of Colleges and Secondary Schools. An AACTE accrediting team visited the campus in 1953, and a North Central Association team visited the campus in 1954, and again in 1957. Highly favorable reports resulted, and the Graduate program of the college was accredited.

PROGRAMS OF STUDY

St. Cloud State College offers (1) **BACHELOR OF SCIENCE** degree programs leading to teaching in all areas of elementary and secondary education, (2) **A BACHELOR OF SCIENCE DEGREE IN MEDICAL TECHNOLOGY**, (3) **BACHELOR OF ARTS** degree for students pursuing programs other than teaching or medical technology, (4) **MASTER OF SCIENCE DEGREES IN EDUCATION**, (5) a **MASTER OF SCIENCE DEGREE IN REHABILITATION COUNSELING**, (6) a two-year program leading to an **ASSOCIATE IN ARTS** degree for students who do not wish to work toward a four-year degree, and (7) **PRE-PROFESSIONAL PROGRAMS** which cover one, two, and three-year curriculums leading to further study in the professional fields at other colleges and universities.

BACHELOR DEGREES

All students working toward either the Bachelor of Arts or Bachelor of Science degrees must meet all of the requirements of the General Education program as listed below:

GENERAL EDUCATION

- *Orientation 021 (1)
- **Speech 161 (4)
- **English 162 (4)
- **English 263 (4)
- Geography 171 (4)
- Health Education 115 (2)
- History 141 or 142 (4)
- Philosophy 110 (4)
- Psychology 121 (4)
- Physical Education (4 one hour activity courses) (4)
- Social Science 104 (4)

Two of the following:

- Art 121 (4)
- English 124 (4)
- Mus 123 (4)

Four of the following:

- Biology 101 (4)
- Biology 104 (4)
- Chemistry 102 (4)
- Mathematics 121 (4)
- Physics 103 (4)
- Science 206 (4)
- Science 207 (4)

Senior Year:

- Social Science 401 (4)
- Current Issues 432 (2)

If a student finds because of advanced placement in Communications that he does not have a total of 68 hours of General Education, he may elect to take these credits in the following courses:

- Business 190 (4)
- Industrial Arts 292 (4)

*Orientation is required of all students but credit does not apply toward required 192 quarter hours.

**12 quarter hours are required of all students unless otherwise indicated by the English Dept.

BACHELOR OF SCIENCE DEGREE IN TEACHER EDUCATION

The Bachelor of Science degree program in teacher education is designed to prepare students for teaching at the elementary, junior high, or high school level.

Elementary Education

To meet the requirements of this program a student must satisfactorily complete 192 quarter hours, which includes (1) General Education requirements, (2) Elementary Education Major, (3) Professional Education Core, and (4) one minor field of 24 or 36 quarter hours.

The course requirements of the Elementary Major are listed in the offerings of the Elementary Education Department.

Minor fields of study which can be applied to the Elementary program are listed in their respective department offerings.

Students majoring in elementary education may concentrate in the following fields:

Kindergarten—Primary
Elementary—Junior High

Mentally Retarded
Orthopedically Handicapped

The courses required in each of these fields listed are presented in detail in School of Education section of this bulletin.

Secondary Education

To meet the requirements of this degree a student must satisfactorily complete 192 quarter hours, which includes the (1) General Education requirements, (2) the Professional Education Core, and (3) one of the following combinations of majors and minors:

1. Comprehensive major field of study of 84 quarter hours.
2. A major field of study of 60 quarter hours and a minor field of 24 quarter hours.
3. A major field of study of 48 quarter hours and a minor field of 36 quarter hours.

Students majoring in secondary education may concentrate in the following major or minor fields:

Professional Education Core

Education 468 (3)—may be taken before or after student teaching.

(Before student teaching)

Psychology 262 (4)

Psychology 462 (4)

Education 447 (secondary) (4)

or

Education 457 (elementary) (4)

(After student teaching)

Psychology 463 (4)

Education 448 (secondary) (3)

or

Education 458 (elementary) (4)

Education 401 (2)

Student Teaching (16)

BACHELOR OF SCIENCE DEGREE IN MEDICAL TECHNOLOGY

The Bachelor of Science degree in Medical Technology requires three years of study in a prescribed curriculum at St. Cloud State College, and a fourth year of internship to be spent at a hospital of medical technology which has been approved by the Council of Medical Education and Hospitals of the American Medical Association. A Bachelor of Science degree in Medical Technology is conferred upon the satisfactory completion of a minimum of 192 quarter hours, which includes the General Education requirements, a year of internship, and the following courses:

Zoology 241, General Zoology (4)
Zoology 242, General Zoology (4)
Zoology 309, Histology (2)
Zoology 342, Comparative Vertebrate Anatomy (4)
Biology 344, Microbiology (4)
Zoology 442, Embryology (4)
Biology 443, Genetics (4)
Zoology 447, Animal Physiology (4)

Chemistry 211, General Inorganic Chemistry (4)
Chemistry 212, General Inorganic Chemistry (4)
Chemistry 223, Qualitative Analysis (4)
Chemistry 321, Introduction to Organic Chemistry (4)
Chemistry 322, Introduction to Organic Chemistry (4)
Chemistry 325, Quantitative Analysis (4)
Mathematics 221, College Algebra (4)
Physics 201, Mechanics and Heat (4)
Physics 202, Electricity, Magnetism, and Light (4)

BACHELOR OF ARTS DEGREES

The Bachelor of Arts degree is designed to meet the needs of students who have educational objectives other than teaching or medical technology.

FIELDS OF CONCENTRATION

A Bachelor of Arts degree is conferred upon the satisfactory completion of a minimum of 192 quarter hours, which includes the General Education requirements and the requirements in "fields of concentration."

A field of concentration may be a departmental major such as English, History, Biology, or Business Administration; or, it may be a broader inter-departmental major such as Natural Science, Language (English and Foreign) and Speech, or Social Studies; or, it may be an area type program of studies drawn from several different departments.

A field of concentration or major must contain not less than 36 quarter hours. The student must also complete at least one secondary field of concentration or minor consisting of not less than 24 quarter hours, taken in a department other than the major department. A minor is not required for the Business Administration, Business Law, or Industrial Technology fields of concentration.

No less than 60 per cent of each field of concentration must consist of courses on the 300 and 400 levels. Professional courses intended specifically for the teacher education program may not be counted toward the degree.

The following programs are available in the Bachelor of Arts program and are outlined in their respective department offerings in this bulletin:

- | | |
|----------------------------|----------------------|
| 1. Business Administration | 5. Political Science |
| 2. Business-Law | 6. Psychology |
| 3. Economics | 7. Sociology |
| 4. Industrial Technology | |

In addition to the above programs a student may earn a field of concentration in the departments listed below. To obtain an outline of the requirements contact the chairman of the department.

Art	English	History	Spanish
Biology	French	Mathematics	Speech
Chemistry	Geography	Physics	Speech Therapy
	German		

ASSOCIATE IN ARTS

The Associate in Arts degree will be conferred upon those students who plan to terminate their college education at the end of two years and who have successfully completed 96 quarter hours of approved courses either in general education or in certain terminal education fields, or who have successfully completed 96 quarter hours in the preprofessional areas leading to advanced study in a professional school.

1. GENERAL—(96)

- Speech 161 (4)
- English 162 (4)
- English 263 (4)
- Health Education (2)
- Humanities or Foreign Language (12)
- Mathematics (4)
- Physical Education (4) one hour Activity Courses (4)
- Science (10-13)
- Social Studies (8)
- Electives (40-46)

These electives may be selected from subjects of special interest to the student, such as business, art, music, industrial arts, journalism, literature, etc.

In addition to the Associate in Arts in general education, a student may pursue a two-year program in the area of Business or Industrial Technology. Students interested in these specific programs should refer to the respective department offerings on pages of this bulletin.

PREPROFESSIONAL

The preprofessional curriculums have been approved by the University of Minnesota as being comparable to those offered at the University. Students may enroll in any one of these areas with the assurance that they may transfer later without loss of credit. The curriculums are not to be regarded as inflexible. They may be adjusted to meet the requirements in special professional curriculums and may be subject to change. Programs of study may also be adapted for certain other areas. Students **SHOULD** check with the specific adviser for assistance.

PRE-AGRICULTURE**Adviser—Mr. Partch**

Chemistry 211, 212 (8)
 Chemistry 321, 322 (8)
 Communications (12)
 Mathematics 220, 221 (4-8)
 Zoology 241, 242 (8)
 Botany 245, 246 (8)
 Health Education 115 (2)
 Speech 320 (4)
 Biology 344 (4)
 Economics 272 (5)
 Humanities (9) or Art, Music,
 Literature, Philosophy, or
 Theatre Arts (non-studio
 courses) (9)
 Social Science: Courses must be
 selected from at least two fields
 with a minimum of 5 credits
 in each of the two fields se-
 lected: economics, geography,
 social science, sociology, psy-
 chology, anthropology (15)
 Electives: (5-9)
 Total: (96)

PRE-DENTISTRY**Adviser—Mr. Serdula**

Communications (12)
 Zoology 241, 242 (8)
 Chemistry 211, 212, 223, 321, 322 (20)
 Mathematics 220 or 221-224 (8)
 Physics 231, 232, 233 (12)
 Psychology 121, 262 (8)
 Biology 104 (4)
 Social Science 104, 401 (8)
 Electives to be chosen from the fol-
 lowing: History 141, Art 121,
 English 124, Music 123, Psychol-
 ogy 222, Sociology 260, Speech
 320 (16)
 Total: (96)

PRE-ENGINEERING**Adviser—Mr. Vandell**

(Prerequisite: Solid Geometry, Higher
 Algebra and Trigonometry.)
 Chemistry 211, 212, 221, 223 (16)
 Communications (12)
 Mathematics 241, 242, 243, 244, 434
 (20)
 Industrial Arts 110, 111, 211, 242, 311
 (13)
 Physics 234, 235, 236, 237, 328, 329,
 334 (34)
 Social Science Group (12)
 Total: (107)

PRE-FORESTRY**Adviser—Mr. Partch**

Industrial Arts 110-111 (5)

Zoology 241, 242 (8)
 Botany 245, 246 (8)
 Chemistry 211, 212, 321, 322 (16)
 Mathematics 221, 224, 330 (12)
 Communications (12)
 Economics 272 (5)
 Physics 231, 232, 233 (12)
 Science 307 (4)
 Speech 320 (4)
 Health Education 115 (2)
 Social Sciences (in addition to
 Economics 272) (10)
 Humanities—9 credits chosen from the
 areas of art, literature, music, phi-
 losophy, or theatre arts. Studio
 courses in art and music, chorus,
 and technical theatre may not be
 applied toward this requirements
 (9)
 Total: (107)

PRE-HOME ECONOMICS**Adviser—Mr. Goehring**

Communications (12)
 Art 121 (4)
 English 124 (4)
 Music 123 (4)
 Mathematics 220 or 221 (4)
 Social Science—selected from at least
 two of the indicated fields with
 at least 5 credits in each of the
 two selected: economics, geogra-
 phy, history, political science,
 psychology, social science, soci-
 ology, anthropology (15)
 Art 231, 232, 234, 332 (12)
 Zoology 241, 242 (8)
 Biology 344 (4)
 Chemistry 211, 212, 321, 322 (16)
 Physical Education (3)
 Physics 103 or 201-202 (4-8)
 Electives: (2-6)
 Total: (96)

PRE-JOURNALISM**Adviser—Mr. Donnelly**

Communications (12)
 Economics 272 (5)
 English 331, 332 (4)
 Foreign Languages (12)
 Health Education 115 (2)
 History 242, 243 (8)
 Political Science 281, 384 (7)
 Biology 101, Chemistry 102, Physi-
 ology 103, Biology 104 (16)
 Public Speaking 320 (4)
 Electives: emphasize social scienc-
 e, psychology, English (26)
 Total: (96)

PRE-LAW**Adviser—Mr. Lieberman**

The student is strongly encouraged to acquire the Bachelor of Arts degree or its equivalent **before** entering Law School. The University of Minnesota Law School requires that prospective students take the Law School Admission Test. For specific aid the pre-professional law adviser should be consulted.

PRE-LIBRARY**Adviser—Mr. Peik**

Communications (12)
Literature (16)
Health Education 115 (2)
History 244, 245, 314 or
History 242, 243, 442 (11-12)
Physical Education (3)
Biology 104, Chemistry 102, Physics
103, Biology 104 (16)
Social Studies (8)
Electives: Foreign Language, Human-
ities (strong departmental em-
phasis preferred) (27)
Total: (96)

PRE-MEDICINE**Adviser—Mr. Bruton**

Zoology 241, 242 (8)
Biology 104, 443, 445 (12)
Chemistry 211, 212, 223 (12)
Chemistry 321, 322, 325, 425, 426
(20)
Communications (12)
Foreign Language (12)
Mathematics 221, 224, 241, 242 (16)
Physics 231, 232, 233 (12)
Psychology 121, 262 (8)
Social Science 104, 401 (8)
Electives in Humanities and Social
Sciences (8)
Electives: (16)
Total: (144)

PRE-NURSING**Adviser—Mr. Serdula****1-year Program**

Chemistry 102, 211, 212 (8)
Communications (12)
Anthropology, Economics, Geogra-
phy, Political Science, Psychol-
ogy, Sociology (12)
Foreign Language or
Art, English Literature, Foreign
Literature, History, Humanities,
Music, Philosophy (12)
Physical Education 203, 205 (2)*
Electives (2)
Total: (48)

*(American Red Cross Certificate in
First Aid will waive these.)

PRE-PHARMACY**Adviser—Mr. Serdula****1-year Program**

Communications (12)
Chemistry 211, 212, 223 (12)
Mathematics 221, 224 (8)
Electives in general education sub-
jects—social sciences or human-
ities (16)
Total: (48)

2-year Program

Communications (12)
Chemistry 211, 212, 223 (12)
Mathematics 221, 224 (8)
Zoology 241, 242 (8)
Botany 245, 246 (8)
Physics 231, 232, 233 (12)
Economics 272 (5)
Business 241, 242 (8)
Chemistry 321, 322 (8)
Electives in general education sub-
jects—social sciences or human-
ities (15)
Total: (96)

PRE-PHYSICAL THERAPY**Adviser—Mr. Serdula**

Zoology 241-242 (8)
Chemistry 211-212 (8)
Math 220 (4)
Physics 201-202 (8)
Psychology 121 (4)
Psychology 262 or 441 or 443 (4)
Phy. Educ. 348 (4)
Phy. Educ. 345 (4)
Health Educ. 115 (2)
Communications (12)
Electives in Humanities and Social
Science (9 or more)
General electives (29)
Total: (96)

PRE-SOCIAL WORK**Adviser—Mr. Lieberman**

Pre-social work students who plan to complete a four-year program at St. Cloud State College should follow the regular curriculum for the B.A. or B.S. degree, with a major preferably in the social sciences. Those students who plan to transfer to the University of Minnesota for completion of their undergraduate work should check with the pre-social work adviser.

PRE-VETERINARY MEDICINE**Adviser—Mr. Partch**

Botany 245, 246 (8)
 Chemistry 211, 212, 223 (12)
 Communications (12)
 Mathematics 221, 224 (8)
 Zoology 241, 242 (8)
 Total: (48)

PRE X-RAY TECHNOLOGY**Adviser—Mr. Serdula**

Zoology 241, 242 (8)
 Biology 344 (4)
 Chemistry 211, 212, 223, 321, 322,
 325 (24)
 Communications (12)
 Physics 201, 202 (8)
 Biology 104 (4)
 Mathematics 220 or 221 (4)
 Electives: (32)
 Total: (96)

GRADUATE STUDY**FIFTH YEAR PROGRAM**

Announcements regarding the content and requirements of this program will be outlined in the Graduate Bulletin and/or in a supplement to this bulletin.

MASTER DEGREES

Courses at the graduate level assume, for each student, a high level of maturity and great breadth and depth of intellectual interests. Consequently, much independence in reading and investigation is expected of students who enroll for graduate study.

GENERAL PURPOSES

Emphasis is placed on directed reading, techniques of primary investigation, independent and constructive thinking. High standards of performance in the ability to organize and evaluate evidence and defend conclusions are required.

The purposes of graduate study at this college are:

- a. To develop to the optimum degree the professional ability of teachers, administrators and counselors, who show promise of becoming superior professional workers. The program is designed to meet the needs of those who wish to continue preparation in the field of education by extending and augmenting their professional and cultural understandings and skills.
- b. To provide for the concentrated study of the more strictly professional phases of preparation for teaching for students whose undergraduate study did not provide for those phases.
- c. To develop appreciations, attitudes, and understandings characteristic of educated persons.
- d. To provide some preparation and experience in educational research to the end that sensitivity to change and an attitude of intelligent inquiry may be fostered.

GENERAL FIELDS OF CONCENTRATION

The graduate program provides advanced preparation in the following general service fields: 1. Elementary school teaching; 2. Elementary school administration; 3. Secondary school teaching; 4. Speech and hearing therapy; 5. School counseling; 6. Remedial reading; 7. Teaching the mentally retarded; 8. Rehabilitation counseling.

ADMISSION TO GRADUATE STUDY

Students who hold baccalaureate degrees from accredited institutions and who present evidence of satisfactory professional preparation at the undergraduate level will be admitted unconditionally. Other students will be admitted conditionally with the approval of the Graduate Council.

Application for admission should be made to the Coordinator of Graduate Studies. It is recommended that such application be made as far in advance of registration as possible. A student who holds the baccalaureate degree from another college should ask the registrar of that college to forward two official copies of his undergraduate transcript to the Coordinator of Graduate Studies at the time that application for admission is made.

GENERAL REQUIREMENTS FOR GRADUATION

Admission to graduate study does not imply admission to candidacy for the master's degree. Such candidacy will be determined after the student has completed part of his work and on the basis of information submitted to the Graduate Council.

A candidate for the Master's degree must earn a minimum of 45 quarter hours of credit at the graduate level. A minimum mark average of "B" is required.

A student may be permitted to transfer not more than nine quarter hours of graduate credit from an accredited institution and/or extension credit earned at this college. However, where credits from National Science Foundation institutes or National Defense Education Act institutes or other Minnesota State Colleges are involved, a maximum of 15 quarter credits may be accepted.

All credits presented in fulfillment of the requirements for the master's degree must have been earned within seven years of the date of the awarding of the degree.

Teaching experience before the awarding of the degree is regarded as highly desirable.

EVENING CLASSES

St. Cloud State College offers a number of graduate courses on campus in the evenings during the regular school year. These courses may be used to satisfy master's degree requirements. For additional information about these courses, write to the Coordinator of Graduate Studies.

COURSE NUMBERING SYSTEM

Courses numbered 500-599 inclusive are courses that may be included in graduate programs. Some of these courses carry a double number, e.g., 450-550. Advanced undergraduate students as well as graduate students may enroll in such courses. Enrollment in courses that carry only a 500 number is restricted to graduate students.

FOR ADDITIONAL INFORMATION

More complete information about the graduate program will be found in the Graduate Bulletin. Requests for this bulletin and all inquiries regarding graduate study should be addressed to: Coordinator of Graduate Studies, State College, St. Cloud, Minnesota.

THE INSTRUCTIONAL PROGRAM

The academic program at St. Cloud State College is organized into instructional schools. The courses of instruction are listed by schools and by departments within the schools, according to the following outline:

SCHOOL OF BUSINESS AND INDUSTRY

Business Administration

Business Education and Office Administration

Industrial Arts

SCHOOL OF EDUCATION

Elementary Education

Health, Physical Education, and Recreation

Psychology

Secondary Education

Special Education

Auxiliary Professional Services: Campus Laboratory School
and Student Teaching

SCHOOL OF SCIENCE, LITERATURE AND ARTS

Art

Biology

Chemistry

English

Economics

Foreign Languages

Geography

History

Mathematics

Music

Philosophy

Physics

Political Science

Speech and Dramatic Art

Sociology

Interdepartmental Fields: Language Arts, Sciences, Social Sciences
and Social Studies

THE SCHOOL OF BUSINESS AND INDUSTRY

Lyle E. Ball, J. D., Dean

Departments

Business Administration

Business Education and Office Administration

Industrial Arts

SCHOOL OF BUSINESS AND INDUSTRY

The School of Business and Industry develops student understandings, knowledge, and skills necessary to function effectively in our business, industrial, and economic system. Opportunities are provided in a number of the major areas of business, industrial, and educational activities for those students who wish a high degree of specialization. The School of Business and Industry adheres to the principal that specialization in business, industrial technology, and education must be accompanied by a broad acquaintance with the subject matter courses in the liberal arts.

The School of Business and Industry is organized into three departments: Business Administration, Business Education and Office Administration, and Industrial Arts. The various departments offer courses leading to the degree of Master of Science, Bachelor of Science, Bachelor of Arts, and Associate of Arts.

BUSINESS ADMINISTRATION

Robert G. Benson, M.S., Chairman

Instruction in Business Administration at St. Cloud State College began in 1946 when the Division of Business, then a teacher training department, first offered courses leading to the Bachelor of Arts degree. Enrollment in this area increased rapidly, and in 1962 a separate department was established to more effectively serve the expanding needs of the Business Administration student. The department offers majors in the following areas:

Accounting

General Business

Marketing

Management

Secretarial Administration

Preparation in any of these areas provides the student with an understanding of practical business principles, procedures, and theories. It also provides opportunities to acquire personal and professional qualities which will increase occupational and professional competence.

BACHELOR OF ARTS

The Department of Business Administration offers Business Administration and Business-Law programs leading to the Bachelor of Arts degree.

Business Administration programs require the completion of the Core courses and a major field of study in Accounting, General Business, Management, Marketing or Secretarial Administration.

The Business-Law program requires the completion of the courses outlined in this bulletin and the satisfactory completion of the first year of study in the University of Minnesota Law School.

BUSINESS ADMINISTRATION**Core Requirements—(68)**

Student must demonstrate proficiency in typing.

BusAd 131 Introduction to Business (4)

BusAd 220 Principles of Marketing (4)

BusAd 230 Mathematics of Finance (4)

BusAd 241, 242, 243 Principles of Accounting (12)

BusAd 260 Management Theory and Practice (4)

BusAd 301, 302 Business Law (8)

BusAd 409 Business Writing (4)

BusAd 440 Business Finance (4)

BusAd 444 Principles of Insurance (4)

Econ 272 Principles of Economics (5)

Econ 372 Modern Economic Problems (3)

Econ Elective (4)

Math 330 Statistics (4)

Psy 222 Business and Industrial (4)

Majors**Accounting (56)**

Accounting majors must complete Principles of Accounting during their Sophomore year.

BusEd 107 Machine Calculation (1)

BusAd 437 Business Law (4)

BusAd 470 Income Tax Accounting A (4)

BusAd 470 Income Tax Accounting B (4)

BusAd 472 Auditing (4)

BusAd 473 Cost Accounting A (4)

BusAd 474 Cost Accounting B (4)

BusAd 475, 476 Intermediate Accounting (8)

BusAd 477 Advanced Accounting (4)

BusAd 480 Accounting Systems (4)

Electives (15)

General Business (56)

BusAd 410 Personnel Administration (4)

BusAd 437 Business Law (4)

BusAd Electives (32)

General Electives (16)

Management (56)

BusAd 381 Managerial Accounting (4)

BusAd 410 Personnel Administration (4)

BusAd 412 Production Management (4)

BusAd 460 Business Organization and Control (4)

BusAd 469 Management Policies and Problems (4)

Econ 473 Labor Economics (4)

Econ 477 Business Economics (4)

Business Electives (12)

Select from BusEd 413, BusAd 461, BusAd 462, BusAd 463, BusAd 464.

General Electives (16)

Marketing (56)

BusAd 410 Personnel Administration (4)

BusAd 416 Credit and Collections (3)

BusAd 420 Principles of Retailing (4)

BusAd 422 Principles of Advertising (4)

BusAd 423 Salesmanship (4)

BusAd 425 Market Research (4)

BusAd 429 Marketing Policies and Problems (4)

BusAd 437 Business Law (4)

Business Electives (12)

Select from BusAd 421, BusAd 424, BusAd 427, BusAd 431, BusAd 461, BusAd 462.

General Electives (13)

Secretarial Administration

Advising of this program is handled by the Department of Business Education and Office Administration.

BusEd 102 and/or 103 Typewriting (3)

BusEd 107 Machine Calculation (1)

BusEd 108 Filing (2)

BusEd 274 Advanced Calculating Machines (2)

BusEd 275 Duplicating Machines (2)

BusEd 323 Administrative Secretarial Procedures (4)

BusEd 413 Office Management (4)

BusEd 414 Office Automation (4)

Student without high school shorthand:

BusEd 211, 212, 213 Shorthand (12)

BusEd 203 Transcription (2)

BusEd 221, 222, 223 Secretarial Science, or BusEd 223, 321, 322 Advanced Secretarial Training (12)

Business Electives (8)

Student with high school shorthand:

BusEd 221, 222, 223 Secretarial Science (12)

BusEd 321, 322 Advanced Secretarial Training (8)

Business Electives (14)

BUSINESS-LAW

This program requires students to attend the University of Minnesota Law School for their fourth and final year.

BusAd 241, 242, 243 Accounting (12)	Hist 335 English History (4)
BusAd 220 Principles of Marketing (4)	Hist 345 American Economic (4)
BusAd 409 Business Writing (4)	Spc 320 Public Speaking (4)
BusAd 412 Production Management (4)	Spc 420 Persuasion (3)
BusAd 440 Business Finance (4)	Psy 222 Business and Industrial (4)
BusAd 444 Insurance (4)	Soc 260 Principles (4)
Econ 272 Principles of Economics (5)	Electives, such as Econ 473; Soc 367,
Econ 372 Modern Problems (3)	Spc 426, and Business courses (not
English 331 Adv. Composition (2)	law) (6-10)
PolS 281 American Government (4)	First year of Law School (senior year)
PolS 382 State Government (3)	(45)

COURSE DESCRIPTIONS**ACCOUNTING**

The Accounting sequence has been approved by the Minnesota State Board of Accountancy. Majors in this area may sit for the C.P.A. exam immediately after graduation.

- 241 Principles of Accounting.** Basic principles, balance sheet, profit and loss statement, trial balance, bookkeeping procedures, special journals, special ledger, notes and interest. (Accounting majors must start the accounting sequence at the beginning of their sophomore year.) This course may be waived by examination upon approval of the department. 4 credits.
- 242 Principles of Accounting.** Continuation of B.A. 241, presenting valuation accounts, accrued and deferred items, voucher systems, and partnerships. 4 credits.
- 243 Principles of Accounting.** Continuation of B.A. 242, presenting corporations, departmental accounting, branch accounting, general factory accounting, budgeting, analysis and interpretation of financial statements. 4 credits.
- 381 Managerial Accounting.** Analysis of managerial control emphasizing budgeting, standard costing, break-even analysis, capital expenditure decisions, and cost-profit-volume analysis. Not open to Accounting majors. Prerequisite, Bus 243. 4 credits.
- 479 C.P.A. Review.** Review of the areas stressed in C.P.A. exam; Auditing, Law, Theory, and Accounting problems (cost, tax, government, consolidations, partnerships, cash flow). Prerequisite: 24 credits in Accounting or consent of department. 4 credits.
- 480 Accounting Systems.** Internal control in accounts receivable, accounts payable, cash receipts, cash payments, purchases, sales, and payroll; methods of data processing. 4 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 470-570 Income Tax Accounting A.** Information to ascertain and report taxable income and compute tax for individuals, analysis of federal and state income tax laws on gross income exclusions, deductions, and exemptions. 4 credits.
- 471-571 Income Tax Accounting B.** Continuation of B.A. 470, including reports for partnerships, corporations, social security taxes, and federal estate and gift taxes. 4 credits.
- 472-572 Auditing.** Advanced accounting student training in theoretical and practical aspects of examining accounting records. Prerequisite: 24 credits in accounting, or consent of instructor. 4 credits.
- 473-573 Cost Accounting A.** Principles, cost analysis. 4 credits.

- 474-574 Cost Accounting B.** Continued cost accounting and cost analysis, emphasizing variations in accounting for overhead, special applications of cost accounting, differential cost analysis, standard and estimated costs. 4 credits.
- 475-575 Intermediate Accounting.** Further study of current assets, non-current assets, liabilities, and stockholder equity. 4 credits.
- 476-576 Intermediate Accounting.** Continuation of B.A. 475, preparation of statements from incomplete data, correction of errors, statement analysis, statement of application funds, partnerships, consignments, and branch accounting. 4 credits.
- 477-577 Advanced Accounting.** Continuation of B.A. 476, corporate combination, consolidated financial statements, statement of affairs, receivership accounts and statements, accounting for estates and trusts, and actuarial science as applied to accounting. 4 credits.
- 478-578 Government Accounting.** Accounting for governmental bodies such as federal, state, county, city, and public institutions. Includes funds, budgetary accounts, encumbrances, accrual methods, and treasurer's accounts. 4 credits.

GENERAL BUSINESS

- 131 Introduction to Business.** The business world: organization, marketing, financing, managerial controls, and governmental regulation. Prerequisite to all Business Administration courses. 4 credits.
- 230 Mathematics of Finance.** Fundamentals of business arithmetic, stressing speed and accuracy in computation, training in commercial algebra, and an introduction to the mathematics of finance. 4 credits.
- 301 Business Law.** Basic legal principles in contracts and negotiable instruments. 4 credits.
- 302 Business Law.** Bailments, common carriers, sales, partnerships, and corporations. 4 credits.
- 409 Business Writing.** Preparation of special business reports, bulletins, letters, manuals of instruction, and factual summaries. 4 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems.** A seminar or conference course for advanced students wishing to work out a special problem in Business. 1-4 credits.
- 416-516 Credit and Collections.** Work of the credit manager, kinds of credit, credit agencies, processing credit applications, and collection procedures. 3 credits.
- 427-527 Real Estate Fundamentals.** Real estate business: property rights, legal processes and instruments, appraisal, zoning, housing, land development, sale, financing, and management. 4 credits.
- 437-537 Business Law.** Continuation of study of law, emphasis on personal property and real property, deeds, mortgages, landlords and tenants, bankruptcy, wills, and agency. 4 credits.
- 440-550 Business Finance.** Problems of starting a business, selection of form of business, financial operations of modern business, and its relations with the investment world. 4 credits.
- 444-544 Principles of Insurance.** Property, liability, and life insurance, economic and social significance of various types of life insurance contracts, structure, management, and investments of life insurance companies. 4 credits.

MANAGEMENT

- 260 Management Theory and Practice.** Historical development of scientific management, and functions of management in the decision making process, introducing current organizational concepts. 4 credits.

- 460 Business Organization and Control.** Management functions at various levels of authority and responsibility in coordination, communication, and delegation within the organization. 4 credits.
- 461 Small Business Management.** Analysis of management problems and responsibilities in organizing, financing, and operating a small business. 4 credits.
- 462 Industrial Purchasing.** Fundamental information regarding procurement principles, procedures, and methods. Planning, systemization, management, research, and analysis. 4 credits.
- 463 Time and Motion, Work Simplification.** Principles and practices, including motions economy, operation, and analysis, methods, micromotion study, stop-watch time study; analysis and synthesis of data and formula construction. 4 credits.
- 464 Collective Bargaining.** Company and union positions in the bargaining process. Gathering, analyzing, and formulating plans; evaluating and revising contracts, costs and administration of labor agreements. 4 credits.
- 469 Management Policies and Problems.** Capstone course in analyzing contemporary management problems, supplemented with case studies and outside readings for a comprehensive management perspective. 4 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 410-510 Personnel Administration.** Principles, basic procedures in employment, job and worker classification, morale, safety, training, labor relations, managerial statistics. Selection techniques, interviewing, employee counseling, job analysis and evaluation. 4 credits.
- 412-512 Production Management.** History of, plant location, buildings, equipment, production, planning, working conditions, product research, procurement, cost control. 4 credits.

MARKETING

- 220 Principles of Marketing.** Marketing functions, market institutions, merchandising and pricing policies. 4 credits.
- 429 Marketing Policies and Problems.** Capstone course in analyzing contemporary American marketing problems. Consumer analysis, product design, distribution channels, pricing strategy, promotion, and legislation. 4 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 420-520 Principles of Retailing.** Location, layout, organization, buying, receiving and marking, stock control, merchandise budget, inventory methods, credit and collection, delivery, and personnel problems. 4 credits.
- 421-521 Elements of Retail Merchandising.** Further study of markup, computation of profit, inventory valuation, stock control, merchandise planning, expense control, and merchandising policies. 4 credits.
- 422-522 Principles of Advertising.** Functions, theory and principles. Purposes of advertising, methods of appeal, elementary problems of copy, layout, typography, selection of media. 4 credits.
- 423-523 Principles of Selling.** Salesman, merchandise, customers, and sale. Practical illustrations and demonstrations. 4 credits.
- 424-524 Sales Management.** Managerial aspects of sales promotion, problems involved in investigations of markets, planning sales effort, management of sales personnel, and control of sales operations. Prerequisite: Business 423-523. 4 credits.
- 425-525 Market Research.** Techniques. Solution of marketing problems. Specialized research activities, product development, advertising research, sales analysis. 4 credits.
- 431-531 Problems in Retailing.** Case-method study of problems in retail profit, merchandising policies, buying, pricing, merchandise control, sales promotion, personnel, store system and operation, and finance. 4 credits.

DEPARTMENT OF BUSINESS EDUCATION AND OFFICE ADMINISTRATION

James G. Marmas, Ed.D., Chairman

The Department of Business Education and Office Administration prepares students for teaching business subjects in the secondary schools and for major office occupations in business, industry, civil service, and professions.

The Bachelor of Science program in business education is designed to provide the student with a broad understanding of the scope, development, and philosophy of business education; to stimulate his interest in the teaching profession; and to prepare him for successful teaching of various business subjects.

The Bachelor of Arts program in secretarial administration is designed to develop secretarial techniques at a high professional level and to open the door to executive secretarial responsibilities in a variety of business fields.

The Associate in Arts programs in secretarial science and clerical practice provide students the opportunity of developing marketable skills, which lead to positions in business.

BACHELOR OF SCIENCE

Major (84)

- BusEd 102 and 103 Typewriting (6)
- BusEd 107 Machine Calculation (1)
- BusEd 108 Filing (2)
- BusAd 131 Introduction to Business (4)
- BusAd 241-242-243 Principles of Accounting (12)
- BusEd 274 Advanced Machine Calculation (2)
- BusEd 275 Duplicating Machines (2)
- BusEd 300 Survey of Business Law (5)
- BusEd 316 Business Communication (4)
- BusEd 351-352-353-354 Methods (8)
- BusEd 446 Consumer Education (4)
- Econ 272 Principles (5)
- Speech 320 Public Speaking (4)

Student without high school shorthand:

- BusEd 211-212-213 Shorthand (12)
- BusEd 203 Transcription (2)
- BusEd 326 Shorthand Theory (4)
- General Electives (7)

Student with high school shorthand:

- BusEd 221-222-223 Secretarial Science
- BusEd 326 Shorthand Theory (16)
- or
- BusEd 321-322 Advanced Secretarial Training
- BusEd 323 Administrative Secretarial Procedures
- BusEd 326 Shorthand Theory (16)
- General Electives (9)

Major (60)

(without shorthand)

- BusEd 102 or 103 Typewriting (3)
- BusEd 107 Machine Calculation (1)
- BusEd 108 Filing (2)
- BusAd 131 Introduction to Business (4)
- BusAd 241-242-243 Principles of Accounting (12)

- BusEd 274 Advanced Machine Calculation (2)
- BusEd 275 Duplicating Machines (2)
- BusEd 300 Survey of Business Law (5)
- BusEd 316 Business Communication (4)
- BusEd 351 Methods in Bookkeeping (2)
- BusEd 352 Methods in Typewriting (2)
- BusEd 354 Methods in Basic and Social Business Subjects (2)
- BusEd 446 Consumer Education, or
- Bus 220 Principles of Marketing (4)
- Econ 272 Principles of Economics (5)
- Related Electives (10)

Business Minors

Accounting (36)

- BusEd 102 or 103 Typewriting (3)
- BusAd 131 Introduction to Business (4)
- BusAd 241-242-243 Principles of Accounting (12)
- BusEd 300 Survey of Business Law (5)
- BusEd 351 Methods in Bookkeeping (2)
- BusEd 352 Methods in Typewriting (2)
- Business Electives (8)

Basic Business (36)

- BusEd 102 or 103 Typewriting (3)
- BusAd 131 Introduction to Business (4)
- BusAd 241 Principles of Accounting (4)
- BusEd 300 Survey of Business Law (5)
- Econ 272 Principles of Economics (5)
- BusEd 352 Methods in Typewriting (2)
- BusEd 354 Methods in Basic and Social Business Subjects (2)
- Two of the following four (8):
- BusAd 220 Principles of Marketing (4)
- BusAd 230 Mathematics of Finance (4)
- BusEd 316 Business Communication (4)
- BusEd 446 Consumer Education (4)
- Business Electives (3)

Marketing (36)

BusEd 102 or 103 Typewriting (3)
 BusAd 131 Introduction to Business (4)
 BusAd 220 Principles of Marketing (4)
 BusAd 241 Principles of Accounting (4)
 Econ 272 Principles of Economics (5)
 BusEd 354 Methods in Basic and
 Social Business Subjects (2)
 BusAd 420 Principles of Retailing (4)
 BusAd 422 Principles of Advertising (4)
 BusAd 423 Salesmanship (4)
 Business Elective (2)

Secretarial Training (36)**Student without high school shorthand:**

BusEd 102 or 103 Typewriting (3)
 BusEd 107 Machine Calculation (1)
 BusEd 108 Filing (2)
 BusAd 131 Introduction to Business (4)
 BusEd 211-212-213 Shorthand (12)
 BusAd 203 Transcription (2)
 BusEd 274 Advanced Machine
 Calculation (2)
 BusEd 275 Duplicating Machines (2)
 BusEd 352 Methods in Typewriting (2)
 BusEd 353 Methods in Shorthand (2)
 Business Elective (4)

Student with high school shorthand:

BusEd 102 or 103 Typewriting (3)
 BusEd 107 Machine Calculation (1)
 BusEd 108 Filing (2)
 BusAd 131 Introduction to Business (4)
 BusEd 221-222-223 Secretarial Sci (12)
 or
 BusEd 321-322 Advanced Secretarial
 Training,
 BusEd 323 Administrative Secretarial
 Procedures (12)
 BusEd 316 Business Communication (4)
 BusEd 274 Advanced Machine
 Calculation (2)
 BusEd 275 Duplication Machines (2)
 BusEd 352 Methods in Typewriting (2)
 BusEd 353 Methods in Shorthand (2)
 Business Elective (2)

Accounting (24)

BusEd 102 or 103 Typewriting (3)
 BusEd 107 Machine Calculation (1)

ASSOCIATE IN ARTS

For the Associate in Arts a student must complete the Core Requirement and a field of concentration in Secretarial Science, Accounting, Retail Selling or Clerical Practice.

Core Requirements (64)

Spc 161 Speech (4)
 Eng 162 Written Comp (4)
 Eng 263 Mass Media (4)
 Science (4)
 HltEd 115 Personal Hygiene (2)
 Hist 141 or 142 (4)

BusAd 131 Introduction to Business (4)
 BusAd 241-242-243 Principles of
 Accounting (12)
 BusEd 351 Methods in Bookkeeping (2)
 BusEd 352 Methods in Typewriting (2)

Basic Business (24)

BusEd 102 or 103 Typewriting (3)
 BusAd 131 Introduction to Business (4)
 BusAd 241 Principles of Accounting (4)
 BusEd 300 Survey of Business Law (5)
 BusEd 446 Consumer Education (4)
 BusEd 352 Methods in Typewriting (2)
 BusEd 354 Methods in Basic and
 Social Business Subjects (2)

Retail Selling (25)

BusEd 102 or 103 Typewriting (3)
 BusAd 131 Introduction to Business (4)
 BusAd 220 Principles of Marketing (4)
 BusAd 241 Principles of Accounting (4)
 BusAd 420 Principles of Retailing (4)
 BusAd 423 Salesmanship (4)
 BusEd 352 Methods in Typewriting,
 or
 BusEd 354 Methods in Basic and
 Social Business Subjects (2)

Secretarial Training (24)**Student without high school shorthand:**

BusEd 102 or 103 Typewriting (3)
 BusEd 211-212-213 Shorthand (12)
 BusEd 203 Transcription (2)
 Business Elective (3)
 BusEd 352 Methods in Typewriting (2)
 BusEd 353 Methods in Shorthand
 and Transcription (2)

Student with high school shorthand:

BusEd 102 or 103 Typewriting (3)
 BusAd 131 Introduction to Business (4)
 BusEd 221-222-223 Secretarial Science
 or
 BusEd 321-322 Advanced Secretarial
 Training,
 BusEd 323 Administrative Secretarial
 Procedures (12)
 Business Elective (1)
 BusEd 352 Methods in Typewriting (2)
 BusEd 353 Methods in Shorthand
 and Transcription (2)

Humanities or Phil 110 (4)
 PhyEd (3 quarters) (3)
 Psy 121 General (4)
 SocSci 104 General (4)
 BusEd 101, 102 or 103 Typewriting (3)
 BusEd 107 Machine Calculation (1)
 Bus Ed 108 Filing (2)

BusAd 131 Introduction to Business (4)
 BusAd 241, 242 Accounting (8)
 BusEd 300 Survey of Business Law (5)
 BusAd 230 Mathematics of Finance (4)
 Electives (depending on which of the
 Business sequences the student
 completes) (0-7)

Secretarial Science (32)

BusEd 102 or 103 Typewriting (3)
 BusEd 274 Advanced Machine
 Calculation (2)
 BusEd 275 Duplicating Machines (2)
 BusEd 316 Business Communication (4)
 BusEd 323 Administrative Secretarial
 Procedures (4)

Student without high school shorthand:

BusEd 211, 212, 213 Shorthand (12)
 BusEd 203 Transcription (2)
 Business Electives depending upon
 shorthand and typewriting
 proficiency (3)

Student with high school shorthand:

BusEd 221, 222, 223 Secretarial
 Science (12)
 or
 BusEd 223 Secretarial Science, 321,
 322 Advanced Secretarial
 Training (12)
 Business Electives depending upon
 shorthand and typewriting
 proficiency (5)

Clerical Practice (32)

BusEd 102 Typewriting (3)
 BusEd 103 Typewriting (3)
 BusEd 274 Advanced Machine
 Calculation (2)
 BusEd 275 Duplicating Machines (2)
 BusEd 316 Business Communication (4)
 BusEd 327 Clerical Office Practice (4)
 BusEd 446 Consumer Education (4)
 Psy 222 Business and Industry (4)
 Business Electives (6)

Accounting (25)

Advising of this program is
 handled by the Department of
 Business Administration.
 BusAd 243, 470, 471, 473 Accounting
 (16)
 or
 BusAd 243, 475, 476, 477 Accounting
 (16)
 Econ 272 Principles of Economics (5)
 BusAd 230 Mathematics of Finance (4)

Retail Selling (25)

Advising of this program is
 handled by the Department of
 Business Administration.
 BusEd 316 Business Communication (4)
 BusAd 220 Principles of Marketing (4)
 BusAd 420 Principles of Retailing (4)
 BusAd 422 Principles of Advertising (4)
 BusAd 423 Salesmanship (4)
 Econ 272 Principles of Economics (5)

COURSE DESCRIPTIONS

Placement in 101, 102, or 103 will be at the discretion of the department.

- 101 Typewriting.** Developing skill in operation of typewriter, simple letter writing and tabulation. May not be taken for credit if the student has had high school typewriting or equivalent. 2 hours lab. 3 credits.
- 102 Typewriting.** A continuation of Business 101, forms and styles of letter writing, speed development. 2 hours lab. 3 credits.
- 103 Typewriting.** A continuation of Business 102, letters, stencils, drafts, legal documents, contracts, and other widely-used business forms, use of electric typewriter, greater accuracy and speed. 2 hours lab. 3 credits.
- 105 Personal Typewriting.** For those wishing to develop basic skill in operation of typewriter as an effective tool for personal and school work. Rental fee for machine: \$5 per term. May be used as a refresher course. No credit.
- 107 Machine Calculation.** Operation of 10-key adding machine, keystroke calculator, and crank-driven calculator. 1 hour lab. 1 credit.
- 108 Filing.** Common systems and filing practice. 2 credits.
- 190 The Role of Business in America.** A general-education elective in the contribution of business to the community, role and costs of government, creative growth of the economy, factors of cost in producing goods and services, inflation, labor-management relations, and management of personal economic affairs. 4 credits.
- 203 Transcription.** Correlated with Business 213 and required to be taken concurrently with Business 213, developing transcription ability and typewriting from office-practice viewpoint. 2 hours lab. 2 credits.
- 206 Typing and Duplicating Skills.** Basic typewriting skill and stencil, gelatin, and direct process duplicating, designed to aid teachers in duplicating their own

- teaching aids such as job sheets, study guides, and tests. Open to any student except business majors and minors. 2 hours lab. 2 credits.
- 211 Shorthand.** Principles of Gregg shorthand, basic characters and their execution, stressing reading and writing ability. May be waived by examination if student has had one or more years of high school shorthand with the approval of the Department of Business Education. May not be taken for credit if the student has had high school shorthand or equivalent. Prerequisite: Typing or consent of department. 4 credits.
- 212 Shorthand.** Continuation of Business 211, completing basic principles of Gregg shorthand and developing ability to read shorthand notes fluently and to take simple dictation. 4 credits.
- 213 Shorthand.** Continuation of Business 212, stressing speed and accuracy in taking dictation and transcribing new material of average difficulty. Students registered for this course are required to take Business 203 at the same time. 4 credits.
- 221 Secretarial Science.** For those who have had some shorthand but whose ability to take shorthand and transcribe accurately is under 100 words per minute. Prerequisite: Ability to take shorthand at rate of 60 words per minute and transcribe accurately. 4 credits.
- 222 Secretarial Science.** Continuation of Business 221, introducing more rapid dictation and transcription, and integrating all forms of office correspondence. Prerequisite: Business 221. 4 credits.
- 223 Secretarial Science.** Continuation of Business 222, increasing student's dictation and transcription power. Prerequisite: Business 222. 4 credits.
- 274 Advanced Machine Calculation.** To develop skill in the use and application of accounting business machines. 2 hours lab. Prerequisite: BusEd 107, or consent of department. 2 credits.
- 275 Duplicating Machines.** To develop skill in the use and application of voice-writing equipment and stencil and spirit duplicators. 2 hours lab. Prerequisite: proficiency in typewriting. 2 credits.
- 300 Survey of Business Law.** To prepare Business Education students to teach business law in high school. 5 credits.
- 316 Business Communication.** Effective business letters, application letters, correct English usage, psychological aspects of business letter writing. Prerequisite: Business 102 or equivalent. 4 credits.
- 321 Advanced Secretarial Training.** Dictation and transcription skillbuilding in simulated office situations. Prerequisite: Ability to take and transcribe shorthand at rate of 100 words per minute. 4 credits.
- 322 Advanced Secretarial Training.** A continuation of Business 321, emphasizing speed in production of all types of office work including letters, stencils, bills, reports, review of filing. Prerequisite: Business 321. 4 credits.
- 323 Administrative Secretarial Procedures.** Secretarial techniques at a high professional level. The scope of a secretarial career; duties and responsibilities; effective office relations. Emphasis on office administration, correspondence, records organization, and supervision; work simplification; legal records and business reports. Prerequisite: skill in typewriting and shorthand. 4 credits.
- 326 Shorthand Theory.** A comprehensive review and application of shorthand theory, and acquaintance with current secretarial procedures. 4 credits.
- 327 Clerical Office Practice.** Handling mail, filing, duplicating, telephone activities, penmanship, keeping forms and records, operating adding and calculating machines, handling payrolls, being a receptionist, grooming, and applying for a position. 4 credits.
- 351 Methods in Bookkeeping.** Subject matter, materials, methods, techniques, and evaluative procedures for teaching bookkeeping. Required before student teaching. 2 credits.
- 352 Methods in Typewriting and Related Subjects.** Instructional materials, methods, techniques, and evaluative procedures for teaching typewriting and related office skills. Required before student teaching. 2 credits.
- 353 Methods in Shorthand and Transcription.** Subject matter, materials, methods, techniques, and evaluative procedures for teaching shorthand, transcription, and office practice. Required before student teaching. 2 credits.

- 354 Methods in Basic and Social Business Subjects.** Subject matter, materials, methods, and evaluative procedures for these subjects. Required before student teaching. 2 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems.** A seminar or conference course for advanced students wishing to work out a special problem in Business. 1-4 credits.
- 413-513 Office Management.** Problems in planning and directing functions of business or professional offices, executive duties and responsibilities of office manager and private secretary, supervision of employees. 4 credits.
- 414-514 Office Automation.** Office management problems involved in the selection, acquisition, application, and operation of modern electronic data processing systems. 4 credits.
- 446-546 Consumer Education.** General education course open to entire student body, some of more perplexing problems of personal banking, wise consumption, buying on credit, borrowing money, making investments, buying insurance, home ownership, household records. 4 credits.
- 450-550 Business for General Education.** For advanced undergraduate and graduate students to enlarge their knowledge of consumer law, newer kinds of household insurance, annuities, pensions, Social Security, tax accounting, estate planning and wills. Not open to business majors or minors. 4 credits.

COURSES FOR GRADUATE STUDENTS

- 580 Foundations in Business Education.** Principles, philosophy, and curriculum development in business education. 3 credits.
- 586 Improvement of Instruction in Secretarial Subjects.** Instructional materials, methods and procedures, standards of achievement, other classroom problems. 3 credits.
- 587 Improvement of Instruction in Bookkeeping and Basic Business Subjects.** Aims, courses of study, materials, teaching techniques, testing programs, other classroom problems. 3 credits.
- 590 Administration and Supervision of Business Education.** Problems of teacher, department head, or supervisor beyond those involved in classroom teaching. Equipment and layout, budget making, publicity, curriculums, selection of textbooks, employment, rating, and related problems. 3 credits.
- 599 Master's Project in Business Education.** 3 credits.

INDUSTRIAL ARTS

Raymond H. Larson, Ph.D., Chairman

The Industrial Arts Department helps the individual to develop concepts, understandings, and appreciations regarding industry, its tools, materials, processes, products, problems, conditions, and workers. Training is in an area of learning rather than in an isolated subject or course. The functions of the Industrial Arts Department are: to prepare industrial arts teachers for instruction on the elementary, junior and senior high school levels; to prepare teachers of driver training; to offer opportunity for graduate study in industrial arts; to prepare technologists for employment in industry; and to offer instructional material, non-vocational in nature, which is an integral part of general education. Ever increasing functions are: meeting the needs of teachers, preprofessional people, recreational workers, and community groups.

Students who have not had higher algebra in high school must take Math 220. Students who have not had a full year of physics in high school must take Physics 201 and 202.

BACHELOR OF SCIENCE INDUSTRIAL ARTS**Major (84)****Core Requirements (58)**

- 110 Technical Drawing I (3)
- 111 Technical Drawing II (2)
- 130 Wood Technology (3)
- 150 History and Philosophy (2)
- 160 Industrial Finishes and Adhesives (2)
- 161 Industrial Crafts (3)
- 211 Industrial Design and Illustrating (3)
- 240 Metal Technology (3)
- 242 Sheetmetal (2)
- 244 Welding I (2)
- 251 Technical Mathematics (3)
- 260 Industrial Materials (2)
- 270 Basic Electricity (3)
- 324 Graphic Arts (3)
- 340 Foundry and Forging (3)
- 346 Machine Metal I (2)
- 351 Course Construction (2)
- 360 Industrial Processes (3)
- 371 Electronics I (Application) (2)
- 430 Machine Wood (2)
- 450 Methods (3)
- 452 Shop Planning (2)
- 480 Power (3)

Electives (26). Elect two 12-hour options or one 24-hour option, from the following:

Option 1: Drawing (12)**BACHELOR OF ARTS****Industrial Technology (192)****Core Requirements (92)**

- Bus 241 Principles of Accounting (4)
- Bus 300 Survey of Business Law (5)
- Econ 272 Principles of Economics (5)
- Econ 372 Modern Economic Problems (3)
- Econ 473 Labor Economics (4)
- Geog 271 Economic Geography (4)
- Hist 345 American Economic History (4)
- IndA 110 Technical Drawing I (3)
- IndA 111 Technical Drawing II (2)
- IndA 130 Wood Technology (3)
- IndA 211 Industrial Design and Illustrating (3)
- IndA 240 Metal Technology (3)
- IndA 244 Welding I (2)
- IndA 260 Industrial Materials (2)
- IndA 270 Basic Electricity (3)

ASSOCIATE IN ARTS**General Education Courses:**

- Spc 161 Speech (4)
- Eng 162 Written Composition (4)
- Eng 263 Communications Media (4)
- Geog 171 Regional Human (4)
- HealthEd 115 Personal Hygiene (2)
- Math 121 Cultural Mathematics (4)

- 311 Technical Drawing III (3)
- 312 Specification Drawing (2)
- 411 Architectural Drawing (5)
- 412 Industrial Design II (2)

Option 2: Electronics (12)

- 372 Electronics II (3)
- 373 Electronics III (2)
- 375 Electric Motors and Generators (2)
- 471 Electronics IV (3)
- 472 Electronics V (2)

Option 3: Institutional Therapy (24)

- IndArts 491 Institutional Therapy (8)
- Psy 262 Human Growth and Development (4)
- Soc 260 Principles of Sociology (4)
- Psy 475 Abnormal Psychology (4)
- Soc 361 Social Deviations (4)

Option 4: Mathematics and/or Physics (12)

Mathematics courses must be equivalent to 221 and above.
Physics courses must be equivalent to 201 and above.

Major (60)

Core of 58 credits same as on 84 credit major. Electives in Industrial Arts and related subjects—(2).

- IndA 324 Graphic Arts (3)
 - IndA 340 Foundry and Forging (3)
 - IndA 346 Machine Metal I (2)
 - IndA 360 Industrial Processes (3)
 - IndA 412 Industrial Design II (2)
 - IndA 430 Machine Wood (2)
 - Math 220 or 221 College Algebra (4)
 - Phys 201 Mechanics and Heat (4)
 - Phys 202 Magnetism, Electricity and Light (4)
 - PolSc 380 Public Administration (3)
 - Psy 222 Business and Industrial (4)
 - Soc 260 Principles of Sociology (4)
 - Spc 320 Public Speaking (4) (or 326)
- Concentration in one of the following areas: Art, Business, English, Mathematics, Physical Science, or Psychology (24).
- General Electives (66-67)

Industrial Technology (96)

- Phys 103 Concepts in Physics (4)
- Psy 121 General (4)
- PhyEd (2)
- SocSci 104 General Social Science (4)

Technology Courses:

- Math 220 Intermediate Algebra or
- Math 221 College Algebra (4)

- | | |
|---|--|
| IndA 110 Technical Drawing I (3) | IndA 260 Industrial Materials (2) |
| IndA 111 Technical Drawing II (2) | IndA 270 Basic Electricity (3) |
| IndA 130 Wood Technology (3) | IndA 324 Graphic Arts (3) |
| IndA 160 Industrial Finishes and Adhesives (2) | IndA 340 Foundry and Forging |
| IndA 161 Industrial Crafts (3) | IndA 346 Machine Metal I (2) |
| IndA 211 Industrial Design and Illustrating (3) | IndA 360 Industrial Processes (3) |
| IndA 240 Metal Technology (3) | IndA 371 Electronics I (2) |
| IndA 242 Sheet Metal or | IndA 430 Machine Wood (2) |
| IndA 244 Welding I (2) | IndA 480 Power (3) |
| | Electives (12). Elect one 12-hour Option as listed in Industrial Arts. |

COURSE DESCRIPTIONS

- 110 Technical Drawing I.** Use and care of instruments, lettering, freehand sketching, orthographic, pictorial, sections, auxiliary, revolutions and measurements. 3 credits.
- 111 Technical Drawing II.** Symbols and conventions common to drawings of machines and machine parts. Special emphasis on dimensioning, tolerances, fasteners, assembly, detail drawings, exploded views, graphing and reproduction of drawings. 2 credits.
- 130 Wood Technology.** Fundamental tools, materials, and processes used in woodwork. Primarily confined to handwork. Machines used only to dimension stock. Elementary wood finishes and finishing. 3 credits.
- 150 History and Philosophy.** History, objectives, and philosophy of industrial education. The distinction between industrial arts and trade-training. Ancestry of industrial arts as an area of general education. 2 credits.
- 160 Industrial Finishes and Adhesives.** Historical background relating the development of industrial finishes and adhesives as well as specific applications of varnishes and synthetic resin. Compare the basic resins common to both finishes and adhesives. Emphasis placed on compounding finishes and adhesives for qualities required by industry. Experimentation with adhesives and finishes. 2 credits.
- 161 Industrial Crafts.** Leather, plastics; forming, shaping, casting, and molding, metal spinning, ceramics; hand work, tile, molds, wood turning, metal etching, and engraving. 3 credits.
- 169 Tools and Machines.** The care and use of tools and machines common to the Art and Drama Departments. Not open to industrial majors. 1 credit.
- 210 Construction and Upholstering.** Construction, repair, and refinishing of covered home furnishings. Sources of essential fabrics and other materials. Comparisons of types of construction. 2 credits.
- 211 Industrial Design and Illustrating.** Application of principles of drawing in design. Projects functional in the several industrial arts areas and at various grade levels provide special problems. 3 credits.
- 214 Technical Drawing III.** Descriptive Geometry. Measurements of distance and angles; intersections of straight or curved lines with plane or curved surfaces; intersections of surfaces, tangent surfaces, size and shape of plane areas and development of plane and curved surfaces. 3 credits.
- 240 Metal Technology.** Processes of bench metal and art metal, and use of common metal working machines. Properties and characteristics of iron, steel, and the nonferrous metals. 3 credits.
- 242 Sheet Metal.** Principles of pattern development. Use of hand tools and machines common to the area. Manipulative work such as soldering, riveting, transfer, assembly, and finishing of sheet metals. 2 credits.
- 244 Welding I.** Principles and practices of gas and arc welding and brazing of cast iron, mild steel and aluminum. 2 credits.
- 251 Technical Mathematics.** Mathematics used in technology and shop processes. Algebra, plane and solid geometry and trigonometry, logarithms, basic operation of the slide rule and use of hand books, applied to problems of industry. Prerequisite: High school higher algebra or equivalent. 3 credits.

- 260 Industrial Materials.** Synthetics; plastics, rubber, abrasives and miscellaneous; building materials; concrete and cement, timber (laminated), and metal alloys. Experimenting with and testing materials for classification as to hardness, availability, advantages and disadvantages for industrial products. The make-up of materials in relation to product and production. 2 credits.
- 270 Basic Electricity.** Primary laws of electricity, electrical wiring (circuits, splicing, soldering, etc.), experiments and construction, experiences with motors, transformers, heating devices, etc. 3 credits.
- 292 Industrial Orientation.** Tools, materials and processes used in industrial production. Materials (synthetic and natural), processes (automatic controls and mechanization, automation), and techniques of product development. Function, philosophies, and programs of industrial education as they relate to vocational and avocational objectives will be discussed. 4 credits.
- 311 Technical Drawing IV.** Construction and application of charts and graphs. Vector analysis, graphical monograms, graphical layout for empirical equations and graphical mathematics. 3 credits.
- 312 Specification Drawing.** Material specifications, architectural specifications, structural specifications, and blue print reading. 2 credits.
- 321 Elementary School Industrial Arts.** Projects, tools, materials and processes of industry which provide experiences and exploration for motivation in the integration of subject matter. (Meets four hours per week.) 2 credits.
- 324 Graphic Arts.** Composition, stone work, proofreading, press work, and distribution. Practical work in bookbinding, silk screening, linoleum block cutting, duplicating, and layout work. 3 credits.
- 340 Foundry and Forging.** Principles of patternmaking, foundry and forging. Casting of nonferrous metal, forging of iron and steel and heat treating of metals. 3 credits.
- 346 Machine Metal I.** Care and use of lathe, miller, shaper, metal saws, and other machinery common to metal area. 2 credits.
- 351 Course Construction.** Techniques and devices employed in analysis to determine operations, jobs, and basic informations; format for organization of instruction within a particular area. A practical application of analysis within a philosophy of industrial arts. 2 credits.
- 360 Industrial Processes.** Terminology involved; automation, automatic mechanization, and mechanization; theory and operation of automation; pneumatics, hydraulics and electronics regarding controls and functions of these areas. Industrial organization for mass production and assembly lines regarding flow charts, time and motion study, tolerances and machine adaptability. 3 credits.
- 371 Electronics I.** Application of electrical principles. Construction of power supplies; half- and full-wave rectifiers; filter circuits; voltage regulation; vibrator supplies; semi-conductor supplies. Construction of amplifiers and tuned circuits. Overview of oscillators. Construction of T.R.F. receivers, regenerative receivers and super-heterodyne receivers. Introduction to solid state electronics. 2 credits.
- 372 Electronics II.** Theory and application of solid state electronics; oscillators: Armstrong, Hartley, Colpitts, tuned-plate and tuned-grid, crystal-type, electron-coupled type, series and shunt feed types; amplifiers: classes A, B, and C: frequency multipliers, telemetry, regenerative clipper circuitry. 3 credits.
- 373 Electronics III.** Theory and application of electric-electronic instruments. A.C. and D.C. ammeters and voltmeters; ohmmeters; meggers; multimeters; vacuum tube voltmeters, power meters; signal generators; bridges and associated equipment; signal tracers; field strength meters; wave meters; fluxmeters; oscilloscopes; growlers. 2 credits.
- 375 Electric Motors and Generators.** Generator and motor operation, physical construction, types and applications. Commutation, speed control, reversal, maintenance, rewinding, phase relationships. Alternators and dynamotors. Types of A.C. motors: rotating field, synchronous, induction (single phase, two phase, three phase), repulsion-induction, and universal. 3 credits.
- 411 Architectural Drawing.** Standard symbols and conventions used in building construction drawing. Designing of plan and elevation of an ideal home. Some work in landscaping and pictorial representation. 3 credits.

- 412 Industrial Design II.** Industrial design, stressing creativity, models and rendering in color. 2 credits.
- 424 Advanced Graphic Arts.** Letterpress and offset printing. Problems in design and color printing common to typography. Special emphasis on plate making, photography, and more advanced work of general printing, bookbinding, and silk screen processes. 2 credits.
- 430 Machine Wood.** Care and use of woodworking machines and special hand tools. Mass-production aspect of woodworking machines. Activity of class based upon a group project whenever possible. 2 credits.
- 450 Methods in Industrial Arts Education.** Lesson planning, instruction sheet, personnel organization, individual and group activities, progress charts, community resources, evaluation, and use of instructional aids. 3 credits.
- 452 Shop Planning, Equipment, and Maintenance.** Theory and practice in planning industrial arts shops; selection, arrangement, and maintenance of equipment. Approaches to new shops and reorganization of existing shop areas. 2 credits.
- 471 Electronics IV.** Theory and application of special transmitters and receivers. Frequency modulation; amplitude modulation; transmission lines; antennas; telephone circuitry; facsimile transmitters and receivers; television; radar; sonar; Doppler. 3 credits.
- 472 Electronics V.** Theory and application of industrial systems and controls. Saturable reactors; magnetic amplifiers; feed-back; photoelectric controls; capacity-operated controls; multivibrator circuitry; programmed control; pneumatic and hydraulic control, overview of automation. 2 credits.
- 480 Power.** Theory and practical experience in varied sources of power: such as double and four stroke cycle engines; automotive, diesel, aircraft and steam engines. 3 credits.
- 490 Driver Education.** Methods and materials available and usable in teaching driver training. The development of adequate programs at both the high school and adult levels. Laws and regulations governing the operation of motor vehicles. Meets certification requirements. 4 credits.
- 491 Institutional Therapy.** Placement in a supervised research or training project which may be a social service agency, correctional institution, hospital, or other approved facility. Approval by college required for acceptance. 1-8 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems.** A seminar or conference course for advanced students wishing to work out a special problem in Industry. 1-4 credits.
- 417-517 Organization and Administration of Industrial Education.** Organization and administration of all-day, part-time, and evening industrial programs. 3 credits.
- 420-520 Electronics and Practical Radio.** Electron emission, tube characteristics, receivers, transmitters, power supplies, amplifiers, rectifiers, oscillators, and radio servicing. Prerequisite: Industrial Arts 371 or equivalent. 4 credits.
- 431-531 Evaluation in Industrial Subjects.** Analysis of factors to be evaluated; instruments of measurement to be studied; and techniques of their use. 2 credits.
- 451-551 Selection and Organization of Subject Matter.** Technique of trade and job analysis, selection of teaching content, and organization of content into instruction sheets and course material. 3 credits.

COURSES FOR GRADUATE STUDENTS

- 505 Handicrafts Seminar.** Approached as a shop subject and a recreational activity. Activities based on student demonstration and reports and permitting experimentation with new media. 2 credits.
- 515 Seminar in Industrial Education.** Group exploration of topics bearing on Industrial Education. (Example—Evolution of psychologies of learning as they relate to Industrial Education.) 2 credits.

- 530 Improvement of Instruction in Shop Subjects.** Investigation of specific shop problems; improvement of individual skills and knowledges; opportunity for experimentation; and setting up new shop areas. 2-6 credits.
- 568 Current Literature and Research.** Analysis of literature of industrial field with special attention to individual readings and reports; implications of such literature in current problems in Industrial Education. 4 credits.
- 573 Leaders and Movements in Industrial Education.** Contributors to development of industrial education, with special attention to the economic, social, and philosophical factors motivating this development. 4 credits.

SCHOOL OF EDUCATION

The primary function of the School of Education is to provide the necessary professional background in educational philosophy, methods, theory and practice needed for effective teaching.

Work in the School for the preparation of teachers consists of (1) professional course work, and (2) professional laboratory experiences.

Professional course work provides the opportunity to acquire knowledge and understanding of the historical and philosophical foundations of education, the methods and materials in teaching skills and content, appraisal of the results of the teaching-learning process, curriculum organization and the responsibilities of teachers as professional people.

Professional laboratory experiences provide students with the opportunity under guidance to develop skills in and understanding of the teaching-learning process through observation, demonstration, participation and student teaching.

The department of Elementary Education, Secondary Education, Special Education and Psychology provides the professional course work and the auxiliary services. The Thomas J. Gray Laboratory School and the Student Teaching Office provide professional laboratory experiences which directly or in cooperation with public schools in the college service area.

In addition to the primary function of teacher education, departments of the School of Education serve the college in two ways: (1) the department of Health, Physical Education and Recreation and Psychology contribute to the general education program for the entire student body; (2) the department of psychology offers work leading to a Bachelor of Arts degree in psychology.

SPECIAL AREAS OF CERTIFICATION

Elementary Teaching Certification

Qualification for elementary or secondary teaching certification requires (1) an elementary or secondary teacher's certificate based on a bachelor's degree; (2) two years of successful teaching experience; (3) and one course in each of the following areas which can be a part of or beyond the bachelor's degree requirements.

Elementary:

- Developmental reading—Education 415 or 417
- Diagnosis and correction of reading difficulties—Education 411-413
- Individual mental testing—Psychology 420-422 or Psychology 427-429
- Measurement in analysis of reading difficulties—Education 411-413
- Measurement in correction of reading difficulties—Education 425-427

or student teaching in the Psychological Services Center

Secondary:

The requirements in this field are the same as for the elementary, with addition of a sixth area requirement. Secondary developmental reading—Education 417.

SCHOOL OF EDUCATION

Irvamae Applegate, Ph.D., Chairman

Departments

Elementary Education

Health, Physical Education and Recreation

Psychology

Secondary Education

Special Education

Auxiliary Professional Services

Campus Laboratory School

SCHOOL OF EDUCATION

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SPECIAL AREAS OF CERTIFICATION

Remedial Reading Certification

Qualification for elementary or secondary remedial reading certification requires (1) an elementary or secondary teacher's certificate based on a bachelor's degree, (2) two years of successful teaching experience, (3) and one course in each of the following areas, which can be a part of or beyond the bachelor's degree requirements:

Elementary:

Developmental reading—Education 312 or 412

Diagnosis and correction of reading difficulties—Education 421-521

Individual mental testing—Psychology 486-586 or Psychology 487-587

Practicum in analysis of reading difficulties—Education 423-523

Practicum in correction of reading difficulties—Education 425-525

or student teaching in the Psychological Services Center

Secondary:

The requirements in this field are the same as for the elementary with addition of a sixth area requirement; Secondary developmental reading—Education 417.

Audio Visual Coordinator's Certificate

The Coordinator of Audio Visual Education is a teacher in charge of the audio visual program in any single building of a school system or in a school system having only one attendance unit. To qualify for a Coordinator's Certificate, the student shall meet the following requirements:

- I. Possess a valid teaching certificate: Education 592 Elementary School Administration (3)
- II. Required courses:
 - Education 486 Audio-Visual Materials and Methods of Instruction (3)
 - Education 469 Administration of Audio-Visual Programs (2)
- III. Elect one course in any two of the following areas:
 - A. Administration**
Education 474-574 Educational Administration (4)
 - B. Supervision**
Education 475-575 Improvement of Secondary School Instruction (4)
Education 596 Elementary School Supervision (3)
 - C. Curriculum**
Education 560 Elementary School Curriculum (3)
Education 561 Secondary School Curriculum (3)

ELEMENTARY EDUCATION

Donald G. Pollock, Ed.D., Chairman

BACHELOR OF SCIENCE

Elementary Education—(Standard)

Students who complete this curriculum are recommended to receive an Elementary School Certificate qualifying them to teach in any rural or graded elementary school. Qualification in this field requires completion of the following courses for the Elementary Education Major. In addition, students must complete the General Education requirements, Professional Education Core, and a 24 or 36 minor.

- | | |
|----------------------------|----------------------------------|
| Education 312 (4) | Music 251 (2) |
| Education 412 (4) | Biology 326 (3) |
| Physical Education 292 (2) | Science 327 (3) |
| Art 250 (3) | Mathematics 250 (4) |
| English 251 (4) | Speech 283 (4) |
| Industrial Arts 321 (2) | History 346 or Geography 376 (3) |
| Music 250 (3) | Social Studies 320 (3) |

Students will elect the 24 or 36 hour minor, in consultation with their advisor, from one of the following fields: Art, Biology, Chemistry, Economics, English, French, Geography, German, History, Library Science, Music, Science, Social Studies, Sociology, Spanish, Special Education, and Speech and Theatre.

Students who wish to earn music minors will substitute Music 300 and 351 for Music 250 and 251.

Kindergarten-Primary

Qualification in this field requires completion of the General Education requirements, Professional Education Core, a 24 hour minor, Elementary Education Major (Standard) course requirements with the addition of Education 351, and a minimum of 4 credits in Kindergarten student teaching.

Intermediate-Junior High School

Qualification in this field requires completion of the General Education requirements, Professional Education Core, Elementary Education Major (Standard) course requirements, a 24 hour minor, and Education 370.

The remaining elective hours in the Intermediate-Junior High School program must be used to supplement the General Education program in order to earn a minimum of 24 quarter hours in each of two teaching fields. Student teaching at junior high school level is required and is counted as part of the 16 quarter hour requirement in teaching.

SPECIAL EDUCATION

Stanley C. Knox, M.A., Chairman

Mentally Retarded

Qualifications in this field includes all the requirements listed for the Bachelor of Science in Elementary Education and the following:

- Ed 471 Intro. Except. Children (4)
- Psy 473 Psy of Mental Retardation (4)
- Ed 483 Educ Mentally Retarded (4)
- Tchg 416 Teaching Mentally Retarded—credits not applicable to minor.

Select one:

- Psy 468 Advanced Tests and Meas. (4)
- Psy 486 Binet (4)
- Psy 487 Wechsler (4)

Select one:

- Psy 471 Mental Hygiene (4)
- Psy 466 Guidance of Handicapped (4)
- Psy 472 Psychology of Excep. Children (4)

Select electives from following list to total 24 hours in minor:

- Ed 421 Analysis and Corr. Reading Diff (4)
- Ed 423 Practice in Analysis of Reading Disab. (4)
- Ed 425 Practice in Corr. of Reading Disab. (4)
- IndA 161 Industrial Crafts (3)
- Soc 260 Principles (4)

Orthopedically Handicapped (Including Cerebral Palsied)

Qualification in this field includes all the requirements listed for the Bachelor of Science degree in Elementary Education and the following:

- Ed 471 Intro. Except. Children (4)
- Ed 482 Educ. Orthopedically Handicapped (4)
- Spc 381 Speech Science (3)
- Spc 382 Speech Pathology I (3)
- Phy Ed 348 Anatomy and Kinesiology (4)
- Tchg 416 Teaching the Orthopedically Handicapped—credits not applicable to minor.

Select electives from following list to total 24 hours in minor:

- Ed 421 Analysis and Corr. Reading Disab. (4)
- Psy 466 Guidance for Handicapped (4)
- Psy 471 Mental Hygiene (4)
- Psy 472 Psy of Exceptional Children (4)
- Spc 482 Speech Pathology II (3)
- Spc 483 Hearing Conservation (4)
- PhyEd 448 Theory and Tech. of Physical Education

SECONDARY EDUCATION

Fred T. Menninga, Ed.D., Chairman

BACHELOR OF SCIENCE

To meet the requirements of this program a student must satisfactorily complete 192 quarter hours, which includes the (1) General Education requirements, (2) the Professional Education Core, and (3) one of the following combinations of fields of concentration:

1. A comprehensive major field of study of 84 quarter hours.
2. A major field of study of 60 quarter hours and a minor field of 24 quarter hours.
3. A major field of study of 48 quarter hours and a minor field of 36 quarter hours.

The requirements of major and minor fields of study appropriate for the Bachelor of Science degree in secondary education are described in the following departments of this bulletin:

Art	French	Language Arts	Sciences
Biology	Geography	Mathematics	Spanish
Business Education	German	Music	Speech and
Chemistry	Health, Physical	Physics	Dramatic Art
English	Education and	Psychology	
	Recreation	Social Science	
	History	Social Studies	
	Industrial Arts		

EDUCATION

COURSE DESCRIPTIONS

- 020 Reading Rate Improvement.** Rate and adaptation of rate emphasized. College students who have acceptable scores in the college reading entrance tests are eligible for this course. 2 credits (not applicable on degree).
- 022 Improvement of Reading Efficiency.** Reading course with special emphasis on comprehensive and study skills. Open to all students who desire to improve their efficiency in reading. 2 credits (not applicable on degree).
- 103 Community Experiences.** Opportunity for supervised experiences with children and adults prior to professional laboratory experiences. Boy and girl scout work, playground supervision, church classes, field trips, and excursions. 0 to 4 credits.
- 216 Audio-Visual Equipment Operation.** Operation of slide and motion picture projectors, sound amplifiers, and other audio-visual equipment useful in community recreational programs and for the guidance of hobbyists. 1 credit.
- 312 Developmental Reading I.** Reading readiness: initial phase of reading instruction; word-recognition skills; handwriting and spelling skills; lesson planning, work-type and recreational reading. Prerequisite: Psy. 262. (Closed to students with credit in former Ed. 250.) 4 credits.
- 346 Directed Observation.** Observation in Campus Laboratory School, with interpretative discussions of the teacher-pupil activities. Readings to formulate principles and standards of successful teaching. Topics chosen on basis of student needs. 2 or 4 credits.
- 351 Kindergarten, Primary Education.** Aims, methods, philosophy, continuity of growth problems in unified kindergarten, first grade education. Required for students specializing in kindergarten-primary education. 4 credits.
- 356 Unit Teaching in Elementary School.** Philosophy underlying unit teaching, practical suggestions for planning, organizing, and developing a unit of work with children. Relation of unit teaching to total school program. 4 credits.
- 358 Recent Trends in Reading.** For teachers who have not had Ed. 312 during the past 10 years. Teaching techniques and procedures most effective at present time. Current reading materials and reading programs based on needs, interests, and abilities of all children. 4 credits.
- 360 Aviation Education.** To prepare teachers to use vocabulary, information, and teaching materials of the Air Age. No previous experience in aviation necessary. Three credits for class work. One credit additional for eight hours of approved flight experience.
- 369 Educational Photography.** Use of still and movie cameras and photographic darkroom equipment to secure educational pictures. 3 credits.
- 370 Junior High School Education.** Philosophy, developments, status, functions, curricula, organization, and management. 4 credits.
- 401 Teaching Profession.** Historical development of profession, problems of prospective teachers, securing positions, contracts, public relations, professional responsibilities, professional organizations, ethics. (To be taken during the last year in student's program, following completion of student teaching assignment.) 2 credits.

- 412 Developmental Reading II.** Methods and material for development of reading skills, adjusting reading program to meet individual differences, formal and informal diagnosis, integration of language arts and English usage, content area reading. Prerequisite: Ed. 312 and Student Teaching. 4 credits.
- 436 History and Philosophy of American Education.** Nature, aims, and objectives of education in society which has evolved in the United States. Emphasis on development of educational philosophies. 4 credits.
- 447 Secondary School I.** Orientation: history, scope and function, curriculum, instructional practices, other responsibilities of secondary school teacher. Prerequisite: Psy. 462 (To be taken the quarter just preceding student teaching.) 4 credits.
- 448 Secondary School II.** Nature of school, curricular and instructional problems, related responsibilities of the secondary school teacher. Prerequisite: Ed. 447 and student teaching. 4 credits.
- 457 Elementary Education I.** Observation, Methods, and Materials in the Content Subjects. Methods and materials used in teaching of social studies, science, and health. Emphasis is on the unit method of teaching. Prerequisite: Psychology 462. Must be taken before student teaching. 4 credits.
- 458 Elementary Education II.** Observation, Methods, and Materials in the Skill subjects. Methods and materials used in teaching arithmetic and language arts. Prerequisites: Education 457, Mathematics 250. Must be taken before student teaching. 4 credits.
- 459 Elementary Education III.** Organization and Curriculum in the Elementary School. Classroom organization and management, appraisal and promotional policies, and curriculum organization. Prerequisite: Student teaching. 3 credits.
- 468 Audio-Visual Materials and Methods of Instruction.** Techniques of utilizing community resources, field trips, display materials, projected still pictures, motion pictures, television, sound recordings, radio, etc., in educational programs. Opportunity to learn equipment operation. 3 credits.
- 469 Administration of Audio-Visual Programs.** Organization and management of audio-visual programs in schools. Prerequisite: Ed. 468 and Department Approval. 2 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems.** A seminar or conference course for advanced students wishing to work out a special problem in Education. 1-4 credits.
- 417-517 Developmental Reading in Junior and Senior High School.** Nature of high school reading program, development of reading techniques and skills, development of vocabulary, reading interests, and reading ability in content fields, appraisal of reading abilities, diagnosis and remediation. 4 credits undergraduate, 3 credits graduate.
- 419-519 Administration and Supervision of the Reading Program.** Implementation and improvement of reading program from pre-reading through corrective procedures in high school. 4 credits undergraduate, 3 credits graduate.
- 421-521 Analysis and Correction of Reading Disabilities.** Causes of reading difficulties, procedures to diagnose and correct them. Relationship to disabilities of vision, hearing, speech, intelligence, preference, health, readiness, home environment, school environment. Prerequisite: A developmental reading course; one year teaching experience or acceptance in the program for teaching the mentally retarded. 4 credits undergraduate, 3 credits graduate.
- 423-523 Practice in Analysis of Reading Disabilities.** Clinical experiences in administration and interpretation of techniques in diagnosing reading disabilities. Opportunity to determine causes of disabilities found in cases sent to Psychological Services Center and to prescribe needed remediation. Prerequisite: Ed. 421-521 and Department approval. 4 credits undergraduate, 3 credits graduate.
- 425-525 Practice in Correction of Reading Disabilities.** Clinical experiences in correction of reading disabilities of cases diagnosed by Psychological Services Center. Prerequisite: Ed. 423-523 and Department approval. 4 credits undergraduate, 3 credits graduate.

- 450-550 School Law.** Statutes and judicial decisions affecting public education in Minnesota and other states. Legal authority, powers, and liabilities of school personnel with respect to school finance, curriculum, property, contracts, pensions, tenure, etc. 4 credits undergraduate, 3 credits graduate.
- 471-571 Introduction to Exceptional Children.** Recognition, needs, and guidance of children who deviate significantly in physical, mental, emotional, or social characteristics, implications for education of all children. 4 credits undergraduate, 3 credits graduate.
- 474-574 Educational Administration.** Administration in United States, problems related to participation of Federal government in education, organization and duties of State departments of education, types of school districts, major activities of boards and superintendents of local school units. 4 credits undergraduate, 3 credits graduate.
- 475-575 Improvement of Secondary School Instruction.** Learning principles at adolescent level, curriculum, planning for classroom instruction, managing a classroom, conducting individual and group work, using instructional materials, study and work habits. 4 credits undergraduate, 3 credits graduate.
- 478-578 Principles and Techniques of Supervision of Student Teachers.** Student teaching in professional curriculum, procedures for guiding students in planning, teaching, and evaluating learning activities. Prerequisite: Two years successful teaching experience. (Enrollment restricted to present and past co-operating teachers and those in a position to supervise student teachers.) 4 credits undergraduate, 3 credits graduate.
- 481-581 Education of the Gifted.** Identification, characteristics, psychological factors. Improvement of instruction. Prerequisite: a course in Exceptional Children. 3 credits.
- 482-582 Education of the Orthopedically Handicapped.** Special problems. Cerebral palsied. Professional and physical resources. Adjustment of curriculum. Professional records. Prerequisite: Education 471-571. 4 credits undergraduate, 3 credits graduate.
- 483-583 Education of the Mentally Retarded.** Screening and selection. Organization of school programs. Curriculum development and special procedures. Integration into general school programs. Growth and development. Relationships with parents, school, community. Observation. Prerequisite: Education 471-571. 4 credits undergraduate, 3 credits graduate.
- 495-595 Workshop in Elementary Education.** Specific teaching problems of experienced teachers, intensive study under direction of workshop staff who give personal guidance, suggest methods, references, and resources. Prerequisite: Teaching experience and permission of workshop staff. 4 to 8 credits undergraduate, 3 to 6 credits graduate.
- 497-597 Aviation Education Workshop.** Aviation in planning teaching units and in developing background for teaching about the Air Age. Teaching aids, lectures, demonstrations, field and laboratory work. 4 credits undergraduate, 3 credits graduate.

COURSES FOR GRADUATE STUDENTS ONLY

- 559 Problems in American Education.** Emphasis on the most general of the issues arising in our American educational situation; organizing principle of education in a democracy; the school and the state; education and social reconstruction; public schools and religious education; academic freedom; teaching controversial issues. Prerequisite: Eng. 515, or taken concurrently. 3 credits.
- 560 Elementary School Curriculum.** Historical development; current issues and trends; sociological and psychological foundations; organization; programs and procedures of curriculum improvement stressing roles of teacher and administrator. Prerequisite: Eng. 515, or taken concurrently. 3 credits.
- 561 Secondary School Curriculum.** Historical development; current issues and trends; sociological and psychological foundations, theories of secondary school education; organization; programs and procedures of curriculum improvement stressing role of teacher. Prerequisite: Eng. 515, or taken concurrently. 3 credits.

- 567 Human Relations.** Techniques and practice of group interaction in problematic human relations situations; case analysis; group discussion; socio-drama and role-playing; action research; community and school projects. Prerequisite: Eng. 515, or taken concurrently. 3 credits.
- 569 Philosophy of Education.** Historical aspects of education theory; beliefs, arguments, and assumptions underlying current educational thought and practice. Prerequisite: Eng. 515, or taken concurrently. 3 credits.
- 570 Workshop in Audio-Visual Materials and Methods of Instruction.** Opportunity for experienced teachers and administrators to study questions and problems about instructional materials and methods that are of mutual interest. Activities to be based on needs of workshop members. 4 credits.
- 584 Problems in Special Education.** 3 credits.
- 590 Junior High School Education Seminar.** History, philosophy, and development of junior high school; organization and management; curriculum organization; guidance; extra-curricular activities. 3 credits.
- 592 Elementary School Administration.** Responsibilities of elementary school principal; relationships between teacher, principal, superintendent, and board of education; elementary school program; special learning aids; pupil accounting; use and care of school facilities; non-teaching staff. 3 credits.
- 596 Elementary School Supervision.** Organization, purposes, and procedures for supervision; study of teaching-learning situations with emphasis upon principal's function in diagnosis and improvement of instruction. 3 credits.
- 598 Seminar in Elementary School Administration.** Problems facing principals in organization and administration of elementary schools. Areas of emphasis determined by needs of members of seminar. Open only to experienced elementary school teachers and principals. 3 credits.

STUDENT TEACHING

The student teaching experience may take place in the Campus Laboratory School, off-campus public schools, or both. This experience is provided during the third quarter of the junior year or the first or second quarter of the senior year.

All student teachers in off-campus public schools are required to live in the community, participate in community activities, and study community life. The college will recommend approved housing during the off-campus assignment; however, it is the responsibility of the student teacher to make his own housing arrangements and bear the expense involved.

The prospective student teacher needs to make long-range plans for his total college program at an early date if he is to receive maximum benefits from the student teaching experience.

Application for student teaching assignments must be completed and on file in office, 205 Stewart Hall, by the close of the second week of the quarter prior to the quarter for which the assignment is requested. The application process includes the following:

1. Certification of Readiness for Student Teaching.
 - a. An honor point ratio of 2.0 or more in the major(s), minor(s), professional education, and in total number of credit hours completed at the time of application.
 - b. Acceptance to a Major Program.
 - c. Admission to Teacher Education.
 - d. Recommendation by department chairmen.
2. Health Examination.
3. Information requested on the Personal Data Form.
4. Two copies of the Tentative Schedule for the quarter of student teaching.
5. Recent photograph of the applicant.
6. Psychology 462, Education 312, 447 or 457 must be completed in or in progress at the time of application. The appropriate communication sequence must be completed at the time of application.

Before certifying a student's readiness for student teaching, the department chairmen will determine that the student has met the student teaching prerequisites of his department.

The specific dates for application for student teaching appear in the College Catalogue. It should be noted that applications for FALL Quarter student teaching assignments must be completed during the second week of the preceding Spring Quarter.

COURSE DESCRIPTIONS

- 402 Kindergarten Teaching.** Supervised teaching in the kindergarten. Required for elementary majors with kindergarten endorsement. Prerequisite: Psychology 462, Education 351 and 457. 4 to 8 credits.
- 404 Elementary School Teaching.** Supervised teaching in campus laboratory school during first summer session. Teaching done during second or third morning period; conferences held during second afternoon period. Prerequisite: Psychology 462 and Education 457. 4 credits.
- 405 Elementary School Teaching.** Supervised teaching in the elementary school for students on elementary school curriculum. Prerequisite: Psychology 462 and Education 457. 16 credits.
- 406 Elementary School Teaching.** Supervised teaching in the elementary school. Required for elementary majors certified in any of the following areas: kindergarten, junior high school, mentally retarded and cerebral palsied or orthopedically handicapped. Prerequisite: Psychology 462 and Education 457. 8 credits.
- 410 Junior High School Teaching.** Supervised teaching in the junior high school. Required for elementary majors with junior high endorsement. Prerequisite: Psychology 462 and Education 457. 8 credits.
- 412 Secondary School Teaching.** Supervised teaching in the secondary school for students on secondary school curriculum. Prerequisite: Psychology 462 and Education 447. 8 or 16 credits.
- 414 Special Area Teaching.** Supervised teaching for students with majors in fine arts, music, industrial arts, health and physical education, or a minor in library science. Prerequisite: Psychology 462 and Education 447 or 457. 8 or 16 credits.
- 415 Teaching the Mentally Retarded.** Supervised teaching of the mentally retarded. Prerequisite: Psychology 462 and Education 447 or 457 and Education 483. 4 or 8 credits.
- 416 Teaching the Cerebral Palsied or Orthopedically Handicapped.** Supervised teaching of the cerebral palsied. Prerequisite: Psychology 462 and Education 457 and 482. 4 or 8 credits.
- 417 Elective Teaching.** Supervised teaching available to students desiring additional teaching in Psychological Services Center or special area in which major or minor is taken. Prerequisite: Psychology 462. 1-8 credits.

COURSES FOR GRADUATE STUDENTS ONLY

- 500 Elective Teaching.** Supervised laboratory experience in any of the following areas: teaching, guidance, school administration, supervision of instruction. Prerequisite: Two years successful teaching experience. 2-4 credits.
- 520 Teaching in the Junior High School.** Internship opportunities for observation, participation, and teaching in a junior high school core program; parallel class-work related to nature, conditions, and problems in core teaching. Prerequisite: Undergraduate preparation for junior high school teaching. 6 credits.

HEALTH, PHYSICAL EDUCATION AND RECREATION

Albert F. Brainard, Ed.D., Chairman

Health, Physical Education, and Recreation is a means of education through knowledge, activities, and experiences. These are selected and conducted to enable the individual to develop and maintain maximum mental and physical efficiency,

to acquire useful skills, to conduct himself in socially acceptable ways, and to enjoy wholesome living. The work in Health, Physical Education, and Recreation is classified under two headings, namely: (1) Courses for majors and minors, and (2) Courses for the general student.

A major or minor in Physical Education may be earned only by students enrolled in the four-year course.

Men students electing to major in Physical Education must complete 60 required hours on the combined major of Health, Physical Education, and Recreation. Minors must complete 36 required hours as listed.

Women students electing to major in Physical Education must complete the broad major of 60 hours. Minors must complete 36 required hours as listed.

Major and minor students must complete four 1 quarter hour activity courses in addition to satisfying major or minor requirement.

Physical Education is required of all students. Degrees and diplomas are granted only after all requirements are met including 4 one-quarter hour Activity courses in physical education. **Only 1 hour credit may be earned in any 1 quarter to apply on constant requirements**, except for majors and minors. A student whose major or minor is in another department may select other courses in physical education to apply toward graduation.

No minors (men) are eligible to take the coaching courses Physical Education 251-255-265 or 267 until they have completed 8 credits in other physical education courses.

All students are required to take a physical-medical examination. Individual courses are arranged for those found unable to take the regular work. **Upon recommendation of the Department and the College Health Service**, students over 40 years of age may take suitable adapted courses, or at the discretion of the Department certain health courses may be prescribed.

Students are asked not to purchase gymnasium suits or shoes until after the first meeting of the class. Uniforms range from \$3 to \$6 depending upon the course taken.

BACHELOR OF SCIENCE

Health and Physical Education for Men

Major (60)

- 151 Gym Stunts (2)
- 204 First Aid and Training (2)
- 221 Coaching of Wrestling (1)
- 235 Square Dance (1)
- 257 Recreation Activities (2)
- 259 Swimming (2)
- 261 Dancing and Rhythms (2)
- 263 Sports Education (2)
- 333 Org. Phys. Educ. in Recr. (3)
- 345 Human Physiology (4)
- 348 Anatomy and Kinesiology (4)
- 375 Methods in Phys. Educ. (3)
- 352 Tests and Meas. in Phys. Educ. (2)
- 411 Org. and Devel. of Phys. Ed. in Elem. School (4)
- 450 Curriculum (4)
- 451 Adapted Physical Education (2)
- 456 Adm. of Interscholastic Athletics (3)
- 210 School Nutrition (3)
- 315 Org. and Adm. School Health Program (4)
- 338 Methods and Materials (4)

Select two of the following:

- 251 Coaching Basketball (3)
- 255 Coaching Football (3)
- 265 Coaching Baseball (3)
- 267 Coaching Track (3)

Minor (36)

- 151 Gymnastic Stunts (2)
 - 204 First Aid and Training (2)
 - 221 Coaching of Wrestling (1)
 - 235 Square Dancing (1)
 - 257 Recreation Activities (2)
 - 259 Swimming (2)
 - 261 Dancing and Rhythms (2)
 - 263 Sports Education (2)
 - 333 Organization Physical Education in Recreation (3)
 - 348 Anatomy and Kinesiology (4)
 - 450 Curriculum (4)
 - 375 Methods in Physical Education (3)
 - *Elective (5)
- Select one of the following:
- 251 Coaching Basketball (3)
 - 255 Coaching Football (3)
 - 265 Coaching Baseball (3)
 - 267 Coaching Track (3)

*Electives may be selected from any Physical Education courses except one hour courses.

Physical Education for Women**Major (60)**

- 100 Hockey and Soccer (1)
- 102 Volleyball and Basketball (1)
- 103 Softball, Track and Field (1)
- 104 Modern Dance (1)
- 105 Advanced Modern Dance (1)
- 106 Apparatus, Stunts and Tumbling (1)
- 110 Introduction to Physical Ed. (2)
- 122 Efficiency of Movement (1)
- 203 Standard First Aid (1)
- 205 Advanced First Aid (1)
- 212 Camping Education (4)
- **268 Teaching of Swimming (1)
- 261 Dancing and Rhythms (2)
- 345 Human Physiology (4)
- 348 Anatomy and Kinesiology (4)
- 352 Tests and Measurements (2)
- 353 Organization of Materials (4)
- 358 Techniques of Team Sports (2)
- 378 Techniques of Individual and Dual Sports (2)
- 368-369-370 Officiating (1)
- 411 Organization and Development of Physical Education in the Elementary School (4)
- 432 Teaching of Dance (2)
- 450 Curriculum (4)
- 451 Adapted Physical Education (2)
- 455 Extra-Class Activities (2)
- HltEd 315 School Health Program (4)
- HltEd 338 Methods and Materials (4)
- Elective (1)

**Health Education
Minor (24)**

- 204 First Aid (2)
- 210 School Nutrition (3)
- 305 Safety Education (2)
- 315 School Health Program (4)
- 338 Methods and Materials (4)
- 345 Physiology or 445 Biology (4)
- 451 Adapted Physical Education (2)
- 471 Mental Health (3)

Minor (36)

- 100 Hockey and Soccer (1)
- 102 Volleyball and Basketball (1)
- 103 Softball, Track and Field (1)
- 104 Modern Dance (1)

- 105 Advanced Modern Dance (1)
- 106 Apparatus, Stunts and Tumbling (1)
- 110 Introduction to Physical Ed. (2)
- 122 Efficiency of Movement (1)
- 205 Advanced First Aid (1)
- 261 Dancing and Rhythms (2)
- 348 Anatomy and Kinesiology (4)
- 353 Organization of Materials (4)
- 358 Techniques of Team Sports (2)
- 378 Techniques of Individual and Dual Sports (2)
- 411 Organization and Development of Physical Education in the Elementary School (4)
- 432 Teaching of Dance (2)
- 450 Curriculum (4)
- 455 Extra-Class Activities (2)
- Total (36)

A regular part of the major and minor in Physical Education is participation in the intramural program each quarter.

Recreation Minor (36)

This program requires the completion of 16 credits in the Core and 20 credits in the Skill Areas listed here. No more than 10 credits may be taken in any one skill area. Students must consult with the adviser of this program for selection of Skill Area courses.

Core (16)

- IndA 161 Industrial Crafts (3)
- Soc 222 Public Recreation (3)
- PhyEd 203 First Aid (1)
- PhyEd 212 Camping Education (4)
- PhyEd 333 Organization of Physical Education Act. in Recreation (3)
- PhyEd 335 Practicum in Recreation I (1)
- PhyEd 337 Practicum in Recreation II (1)

Skill Areas (20)

- Consult adviser for selection of courses.
- Physical Education
- Drama and Speech
- Nature Activities
- Arts, Crafts, Music

PHYSICAL EDUCATION**MAJOR COURSES****MEN and WOMEN**

- 235 Square Dancing.** To satisfy interest developed in other rhythm classes and to create interest in historic and literary significance of square dance. (m & w) 1 credit.
- 261 Dancing and Rhythms.** Study and practice of simple rhythms, folk, square, and social dancing. 2 credits.

- 345 Human Physiology.** The basic systems of the body, e.g., neurons, circulatory, and the mechanisms influencing these systems, e.g., reflex mechanism, vasomotor mechanism, etc. Prerequisite: 348. 4 credits.
- 348 Anatomy and Kinesiology.** The skeletal and muscular structure of the body—applied anatomy and kinesiology, e.g., analysis of movements. 4 credits.
- 352 Tests and Measurements in Physical Education.** Evaluative tools and techniques unique to physical education activities. Laboratory exercises in selected tests and evaluative procedures. Prerequisite: 345. 2 credits.
- 450 Curriculum in Physical Education.** Planning units of work; psychological, sociological, and physiological factors involved. Open only to majors or minors except by consent of division. 4 credits.
- 451 Adapted Physical Education.** Corrective or remedial measures to be used in providing adapted exercises and procedures in handling individuals with handicapped conditions. Prerequisite: 345, or consent of instructor. 2 credits.

MAJOR COURSES MEN

- 151 Gymnastic Stunts.** Fundamental skills involved in doing exercises in tumbling and on apparatus. Progression in difficulty. 2 credits.
- 204 First Aid and Training.** Theory and practice of treatment of injuries through first aid. 2 credits.
- 221 Coaching of Wrestling.** To prepare majors and minors in physical education to coach and supervise a wrestling program both in physical education and after-school program. Open only to majors and minors. Prerequisite: 121. 1 credit.
- 251 Coaching Basketball.** Theory of basketball coaching with some laboratory experiences. Basic stratagems of modern basketball. Open only to majors and minors in physical education. 3 credits.
- 255 Coaching Football.** Theory and practice of coaching different styles of offense and defense. Fundamentals of forward pass, punting, center pass, and team strategy. Open only to majors and minors in physical education. 3 credits.
- 257 Recreational Activities.** Skills and methods involved in handball, badminton, ping pong, shuffleboard, skating, and similar games. 2 credits.
- 259 Swimming.** Theory and practice of skills involved in the American National Red Cross nine swimming styles. Methods of conducting classwork in water activities and competitive water events. Student must furnish cap and suit. 2 credits.
- 263 Sports Education.** Skills and methods involved in some so-called minor sports: soccer, archery, volleyball, speedball, and games of like nature. Training in directing conditioning exercises. 2 credits.
- 265 Coaching of Baseball.** Theory and practice, all positions. History and background, defensive phases, team strategy, rules. Open only to majors and minors in physical education. 3 credits.
- 267 Coaching of Track.** Theory and practice, all track and field events. How to conduct track meets. Open only to majors and minors in physical education. 3 credits.
- 305 Officiating—Football and Basketball.** Techniques involved in officiating high school football and basketball. Rules governing these sports. Six weeks will be devoted to each sport, with some practical work assigned in each area. 2 credits.
- 375 Methods in Physical Education.** Organization of classwork, use of teaching aids and conducting classwork of various age levels. 3 credits.
- 456 Administration of Interscholastic Athletics.** History and objectives of high school athletics, local organization, state and national control over high school athletics; safety and sanitation in athletics. 3 credits.

MAJOR COURSES WOMEN

- 100 Hockey and Soccer.** Techniques of fundamental skills. 1 credit.
- 102 Volleyball and Basketball.** Techniques of fundamental skills. 1 credit.

- 103 Softball, Track and Field.** Techniques of fundamental skills and methods of teaching. 1 credit.
- 104 Beginning Modern Dance.** Techniques of fundamental skills and rhythm analysis. 1 credit.
- 105 Advanced Modern Dance.** Advanced techniques and dance composition. 1 credit.
- 106 Apparatus, Stunts and Tumbling.** Techniques of fundamental skills. 1 credit.
- 110 Introduction to Physical Education.** Orientation in physical education for women majors and minors. Includes brief history, philosophy, qualifications, and opportunities in the profession. 2 credits.
- 122 Efficiency of Movement.** Techniques of body mechanics. 1 credit.
- 268 Teaching of Swimming.** Methods and techniques of teaching; training of Water Front Safety Instructors. (m & w) Prerequisite: 266 or the equivalent. 1 credit.
- 353 Organization of Materials.** Method of presentation and adaptation of materials on secondary level. 4 credits.
- 358 Team Sports.** Techniques of advanced skills and methods of teaching. Prerequisite: 100 and 102. 2 credits.
- 368-370 Officiating.** Rules interpretations, officiating techniques and practice. Fall sports, winter sports, spring sports. 1 credit.
Note: Credit will be given only when all three sports seasons are completed.
- 378 Technique of Individual and Dual Sports.** Technique of advanced skills and methods of teaching. Prerequisite: 230 and 232 or equivalent. 2 credits.
- 432 Techniques in Teaching Dancing.** Available materials and methods of teaching social, tap, folk, and modern dance. 2 credits.
- 455 Extra-Class Activities.** Organization and administration of Play Days, Sports Days, Demonstrations, Pageants, Intramural Programs, and G.A.A. 2 credits.

GENERAL COURSES

The designation (m) refers to courses for men

(w) refers to courses for women

(m & w) refers to courses for both

- 120 Orientation in Physical Education.** Skills and knowledge associated with basketball, volleyball, touchball, speedball, soccer, and similar activities according to the season. (m) 1 credit.
- 121 Wrestling.** Skills in performing fundamental positions, holds and breaks, taking opponent to mat; defenses, riding opponent, offense, and defense. (m) 1 credit.
- 126 Gymnastic Stunts.** Skills in balancing in both single and double stunts. (m) 1 credit.
- 127 Individual Athletics.** Self testing activities in fundamental skills in throwing, running, jumping, climbing, vaulting. (m) 1 credit.
- 128 Individual Gymnastics.** Special exercises for correction of defects. Physically handicapped students advised to take this course. (m) 1 credit.
- 130 Skating.** Skills involved in beginning figure skating. Some recreational and speed skating. Student must furnish figure skates. (m & w) 1 credit.
- 131 Stunts and Games for the Elementary School Child.** Materials, methods, outlines of stunts, games, achievement, and efficiency tests for elementary teacher. **Required of all Elementary Majors.** (m & w) 1 credit.
- 132 Individual and Recreational Games.** Individual and dual sports such as shuffleboard, deck tennis, aerial darts, table tennis, bowling, etc. (m & w). 1 credit.
- 133 Rhythms and Dances for the Elementary School Child.** Simple folk dances, singing games and free rhythms suitable for all elementary grade levels. **Required of all Elementary Majors.** (m & w). 1 credit.
- 134 Advanced Folk and Social Dancing.** Advanced folk and social dancing. (m & w) Prerequisite: 153. 1 credit.
- 135 Observation and Individual Gymnastics.** For students unable to participate in any activity course. To be substituted for the required work upon recommendation of school nurse or doctor, or department of physical education. (w) 1 credit.

- 136 Swimming.** For students who **cannot** swim in deep water. Elementary strokes and diving. (m & w) Student must furnish cap and suit. 1 credit.
- 138 Intermediate Swimming.** Intermediate level swimming with emphasis on side, back, and crawl strokes. Prerequisite: 136 or equivalent. (m & w) Student must furnish cap and suit. 1 credit.
- 139 Advanced Swimming.** Advanced strokes and diving. Prerequisite: 138 or equivalent. (m & w) Student must furnish cap and suit. 1 credit.
- 140 Advanced Swimming Skills.** Permits qualification for Senior Life Saving Achievement in feats of endurance, speed, and skill. Prerequisite: 139 or equivalent. (m & w) Student must furnish cap and suit. 1 credit.
- 141 Body Mechanics.** Health habits, normal carriages, flexibility according to individual needs and abilities. (w) 1 credit.
- 142 Field Hockey.** Individual skill in team strategy, to provide student with ability for teaching and officiating. (w) 1 credit.
- 143 Soccer.** Individual skill in team strategy, to provide student with ability for teaching and officiating. (w) 1 credit.
- 144 Volleyball.** Volleyball skills and techniques. (m & w) 1 credit.
- 145 Basketball.** Individual skill in team strategy, to provide student with ability for teaching and officiating. (w) 1 credit.
- 146 Softball.** Individual skill in team strategy, to provide student with ability for teaching and officiating. (w) 1 credit.
- 153 Folk Dancing.** Simple folk, round, and mixer dances. (m & w) 1 credit.
- 200 Skiing.** Basic techniques and knowledge. Students furnish own ski boots. (m & w) 1 credit.
- 203 First Aid.** Standard course. Basic knowledge of skills necessary to give first aid to victims of accidents or sudden illness. (m & w) 1 credit.
- 205 First Aid.** Advanced course. Working knowledge of advanced techniques in giving first aid to victims of accidents or sudden illness. (m & w) Prerequisite: 203 or current Red Cross Standard First Aid Certificate. 1 credit.
- 207 First Aid.** Designed to qualify students to teach first aid and issue American Red Cross certificates. Prerequisite: 203 and 205 or 204. (m & w) 1 credit.
- 212 Camping Education.** Types of camps, underlying philosophies, trends, camp standards, program planning, cabin counseling, and camp craft skills. (m & w) 4 credits.
- 230 Tennis.** Beginning Tennis. Court positions, footwork, and rules. Fundamental skills of serving, forehand, and backhand. (m & w) Student must furnish racket and balls. 1 credit.
- 231 Intermediate Tennis.** Strategy, singles, and doubles. Techniques used in advanced tennis tournaments. (m & w) Student must furnish racket and balls. 1 credit.
- 232 Badminton.** Terminology, fundamentals, techniques, grip, footwork, service stroking, strategy, and etiquette. Single and doubles game. (m & w) 1 credit.
- 233 Rhythmic Fundamentals.** Techniques to increase range, strength, flexibility, rhythm, and balance, and knowledge of musical notations, terminology, and form as these are related to dance. (m & w) 1 credit.
- 234 Modern Dance.** Development of movement vocabulary; skills in advanced dance technique and in dance composition. (m & w) 1 credit.
- 235 Square Dancing.** To satisfy interest developed in other rhythm classes and to create interest in historic and literary significance of square dance. (m & w) 1 credit.
- 238 Archery.** Beginning Archery. History, basic techniques for target shooting. Terms, rules, and etiquette. (m & w) 1 credit.
- 240 Intermediate Archery.** Adaptation and variation, clout and tournament shooting. (m & w) 1 credit.
- 250 Fly and Bait Casting.** Dry and wet fly and artificial bait casting. (m & w) Student must furnish fly and bait casting equipment. 1 credit.
- 260 Safety and Use of Firearms.** Skill and knowledge in handling all types. Safety stressed. (m & w) Student must furnish firearm and shells. 1 credit.

- 266 Life Saving.** Theory and practice of methods used in Red Cross Life Saving and Water Safety. (m & w) Student must furnish cap and suit. 1 credit.
- 268 Teaching of Swimming.** Methods and techniques of teaching; training of Water Front Safety Instructors. (m & w) Prerequisite: 266. 1 credit.
- 270 Foil Fencing.** Basic techniques and knowledge in the use of the foil. (m & w) 1 credit.
- 275 Golf.** Fundamental strokes, rules, terms, etiquette. Each student must furnish own equipment. (m & w) 1 credit.
- 280 Ice Hockey.** Basic techniques and knowledge used in playing. (m) Student must furnish skates. Prerequisite: 130. 1 credit.
- 290 Basketball for Men.** Basic skills and knowledge used in playing. (m) 1 credit.
- 292 Elementary School Physical Education.** Materials, programming and procedures. Open only to Elementary Education majors. 2 credits.
- 332 Tumbling and Pyramid Building.** Instruction in tumbling and simple pyramid building for grades and high school. Open to all students. Prerequisite: Three quarters of physical education. (w) 1 credit.
- 333 Organization of Physical Education Activities in Recreation.** History and objectives of recreation, leadership and staff, areas, facilities, equipment, activities and program planning. Emphasis on the summer playground program. (m & w) 3 credits.
- 335 Practicum I in Recreation.** Engaging in direction and observation of activities sponsored by the St. Cloud Recreation Department or those offered by the College. Prerequisite: 333. (m & w) 1 credit.
- 337 Practicum II in Recreation.** Engaging in planning and direction of activities sponsored by the St. Cloud Recreation Department or those offered by the College. Prerequisite: 333. (m & w) 1 credit.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems.** A seminar or conference course for advanced students wishing to work out a special problem in Physical Education. 1-4 credits.
- 411-511 Organization and Development of Physical Education in Elementary School.** Principles, problems, and procedures. 4 credits.
- 415-515 Organization and Administration of Intramural Sports.** Methods and materials of the intramural sports program in public schools. Content of program, methods of organizing competition, regulations governing play, outcomes and awards. 3 credits.
- 448-548 Theory and Technique of Physical Medicine.** Causes, treatment, and educational implication of crippling conditions of pre-school and school age children; rehabilitation and life adjustment of individuals with single and multiple physical handicaps; facilities and agencies organized to help the physically handicapped. Prerequisite: 348. 4 credits.
- 450-550 Curriculum in Physical Education.** Planning units of work; psychological, sociological, and physiological factors involved. Open only to majors and minors except by consent of division. 4 credits.
- 456-556 Administration of Interscholastic Athletics.** History and objectives of high school athletics, local organization, state and national control over high school athletics; safety and sanitation in athletics. 3 credits.
- 495-595 Workshops in Health Education, Physical Education and Recreation.** Credits arranged.

COURSES FOR GRADUATE STUDENTS IN PHYSICAL EDUCATION

- 505 History, Principles and Philosophy of Physical Education.** History, principles, and philosophy of organized physical education from its early beginning to present. Effects of foreign countries' work in the field; impact on program in United States. 3 credits.

- 510 Supervision of Instruction in Health and Physical Education.** Planning; teacher qualifications; conducting conferences with health and physical education teachers. 3 credits.
- 535 Theory of Dance.** History, principles, theory, and philosophy underlying dance from primitive times to the present. 3 credits.
- 540 Camping Administration.** Organization and administration of camps; program planning; selection and training of staff; composite selection and development; health and safety. 3 credits.
- 552 Tests and Measurements in Physical Education.** Critical study of tests and measurements available in physical education; methods of constructing and evaluating new tests and measurements. 3 credits.
- 554 Advanced Theory of Competitive Athletics.** Practical problems associated with coaching and training a competitive athlete through high school and college years. No one sport will be stressed. Physical, intellectual, and psychological phases of athlete's life contingent on high performance. 3 credits.
- 560 Administration of Physical Education.** Facilities, equipment, space, time, costs, etc., involved in promotion of a physical education program. 3 credits.
- 599 Master's Project.** 1-3 credits.

COURSE DESCRIPTIONS

HEALTH EDUCATION COURSES

- 115 Health Education.** Care and development of good health habits, including personal and community health. (This course complies with the requirements of Minnesota Statutes Chapter 131.151.) 2 credits.
- 210 School Nutrition.** Role of nutrition in child development. Fundamentals of diet and dietary problems and the school lunch; brief laboratory experience. 3 credits.
- 305 Safety Education.** History and development of safety education; types of accidents; accident prevention; school safety; school safety programs; fire prevention and safe school environment. 2 credits.
- 315 Organization and Administration of School Health Program.** History; legal basis; communicable disease control; school health services and program; emotional climate of school; emergency care; evaluating results of health instruction; role of physical education in health education. 4 credits.
- 338 Methods and Materials in Health Education.** Activities, projects, and units in health curriculums at various age levels. Field trips, teaching observations, practical problems, and evaluation of pertinent materials, texts, and state course of study. 4 credits.

COURSES FOR GRADUATE STUDENTS IN HEALTH EDUCATION

- 530 Seminar in School Health Education.** Critical study of problems confronting teachers engaged in teaching or supervising health education in the public schools. 4 credits.
- 532 Survey of Recent Research in the Field of Health.** Readings and discussions of recent studies and authentic reports in various areas of health interest. 2 credits.

DEPARTMENT OF PSYCHOLOGY

Frank B. Slobetz, Ed.D., Chairman

The Department is responsible for instructional services and related activities in the area of academic and educational psychology.

Its functions include responsibilities to both teacher-education programs and general and liberal arts programs of the college. The Department offers a major

****Placement of women majors in physical education in PhyEd 268 or substitute work in swimming will be subject to recommendations of Women's Department.**

and two minors on the Bachelor of Arts program and two minors on the Bachelor of Science program.

At the graduate level, in addition to responsibilities for graduate offerings in its discipline, the Department is responsible for the administration of programs in School Counselor and Rehabilitation Counselor preparation.

BACHELOR OF ARTS

Major (48)

Psy 250 Principles of Behavior (4)
Math 330 Statistics (4)
Psy 360 Experimental Psychology I (4)
Psy 475 Abnormal (4)
Psy 483 History and Schools (4)
Psy 490 Advanced Theoretical Psychology (4)
Electives (24)

Minor (36)

Psy 250 Principles of Behavior (4)
Math 330 Statistics (4)

Psy 360 Experimental Psychology I (4)
Psy 475 Abnormal (4)
Psy 483 History and Schools (4)
Electives (16)

Restricted Minor (24)

Psy 250 Principles of Behavior (4)
Psy 290 Differential Psychology (4)
Psy 441 Psychology of Childhood (4),
or Psy 443 Psychology of Adolescence (4)
Psy 483 History and Schools (4)
Electives (8)

BACHELOR OF SCIENCE

Secondary Education Minor (36)

Psy 250 Principles of Behavior (4)
Math 330 Statistics (4)
Psy 360 Experimental Psychology I (4)
Psy 475 Abnormal (4)
Psy 483 History and Schools (4)
Electives (16)

Restricted Minor (24)

Psy 250 Principles of Behavior (4)
Psy 290 Differential Psychology (4)
Psy 441 Psychology of Childhood (4),
or Psy 443 Psychology of Adolescence (4)
Psy 483 History and Schools (4)
Electives (8)

COURSE DESCRIPTIONS

- 121 General Psychology.** Introduction to the scientific study of human behavior; implications for the general conduct of life. 4 credits.
- 222 Business and Industrial Psychology.** Applications to business and industry, including advertising, marketing, merchandising; personnel selection, training, placement motivation. Prerequisite: Psy 121. 4 credits.
- 250 Principles of Behavior.** Psychology as a science of behavior with emphasis on representative experimental findings in the areas of perception, motivation, and learning. 4 credits.
- 262 Human Growth and Development.** From prenatal period through adolescence; significance of physical, intellectual, emotional, and social phases as related to total growth; implications for education. Prerequisite: Psychology 121. 4 credits.
- 290 Differential Psychology.** The study of individual differences. Prerequisite: Psy 250. 4 credits.
- 360 Experimental Psychology I.** Methods and techniques in studying the organism in his environment; experimental methods, psychophysical methods, and techniques of study; demonstrations and laboratory experiments. Prerequisite: Math 330. 4 credits.
- 401 Field Work.** Special arrangement with supervising professor, department chairman, deans, and field institution supervisor. 1-4 credits.
- 441 Psychology of Childhood.** Early, middle, and later childhood; principles and philosophy of growth; implications for education; mental hygiene focus. Prerequisite: Psychology 262. 4 credits.
- 443 Psychology of Adolescence.** Behavior of adolescent; characteristics unique to this age group; home, school, and community relations; application at secondary school level. Prerequisite: Psychology 262. 4 credits.

- 462 Learning and Measurement I.** Nature of classroom learning. Measurement and evaluation of learning outcomes. Prerequisite: Psy. 262. (To be taken not earlier than two quarters preceding student teaching.) 4 credits.
- 463 Learning and Measurement II.** Learning process; basic theories; examination; administration and interpretation of tests and other measurement devices. Prerequisite: Psy. 462 and student teaching. 4 credits.
- 490 Advanced Theoretical Psychology.** Critical examination of modern views and theoretical issues in the field of psychology. Limited to majors in psychology. 4 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems.** A seminar or conference course for advanced students wishing to work out a special problem in Psychology. 1-4 credits.
- 464-564 Principles and Practices of the Guidance Program.** Philosophy of guidance, individual appraisal, counseling services, informational services, placement organization, group guidance activities, staff service and contribution, and program organization and administration. 4 credits undergraduate, 3 credits graduate.
- 466-566 Guidance for the Handicapped.** Special problems. Counseling with children and parents. Psychological, aptitude, achievement tests. Prerequisite: Education 471-571. 4 credits undergraduate, 3 credits graduate.
- 468-568 Advanced Tests and Measurements.** Theory and practice in testing and measurement. Critical examination of intelligence, aptitude, interest, personality, and achievement tests; recent developments in assessment of school learning. Prerequisite: Psy. 463. 4 credits undergraduate, 3 credits graduate.
- 471-571 Mental Hygiene.** Characteristics of wholesome personality; methods and aims of mental hygiene; personal development and techniques of effective adjustments in teaching. Prerequisite: Psychology 262. 4 credits undergraduate, 3 credits graduate.
- 472-572 Psychology of Exceptional Children.** Clinical observation of children who have special problems of growth and development, physical and mental handicaps, the mentally gifted, behavior disorders. Prerequisite: Education 471-571 for B.S. students; Psychology 441 or 443 for B.A. students. 4 credits undergraduate, 3 credits graduate.
- 473-573 Psychology of Mental Retardation.** Etiology. Characteristics. Classification, diagnosis, assessment. Social control. Role of family, school, community agencies. Implications for education. Prerequisite: Education 471-571 for B.S. students; Psychology 441 or 443 for B.A. students. 4 credits undergraduate, 3 credits graduate.
- 475-575 Abnormal Psychology.** Functional and organic deviations of psychic activity for understanding normal behavior of human personality with greater clarity and precision. 4 credits undergraduate, 3 credits graduate.
- 476-576 Clinical Psychology I.** Clinical appraisal and diagnosis by use of psychological tests; varieties of behavioral, organic and age group problems in clinical settings. Prerequisite: Psy. 475-575. 4 credits undergraduate, 3 credits graduate.
- 477-577 Clinical Psychology II.** Treatment procedures and methods in clinical problems. Clinical diagnostic procedures; theoretical approaches to psychotherapy. Prerequisite: Psy. 476-576. 4 credits undergraduate, 3 credits graduate.
- Psy 483-583 History and Schools.** Systems, experiments, personalities in the development of modern psychology; comparative study and analysis of systems; contributions of outstanding persons. 4 credits undergraduate, 3 credits graduate.
- 485-585 Theory of Personality Structure.** Basic theoretical concepts, factors of vital relationships within individual personality; interpersonal relationships; individual and field frames of reference as they relate to mental health. At undergraduate level, limited to psychological majors. 4 credits undergraduate, 3 credits graduate.

- 486-586 Binet.** Measurement of intelligence by Stanford revision of Binet-Simon technique; demonstrations, lectures, practice in administration of tests; observation of individual by instructor. Admission by Department approval. 8 hours laboratory. 4 credits undergraduate, 3 credits graduate.
- 487-587 Wechsler.** Measurement of intelligence by Wechsler Adult Intelligence Scales, Wechsler Intelligence Scale for Children, and Wechsler Intelligence Scale for Adults and Adolescents; administering, scoring, and interpreting results. Admission by Department approval. 8 hours laboratory. 4 credits undergraduate, 3 credits graduate.

COURSES FOR GRADUATE STUDENTS

- 563 Theories of Learning.** Psychology of learning; experimental findings; application to problems encountered in teaching and learning; theories of learning. Prerequisite: Eng. 515 or taken concurrently. 3 credits.
- 578 Statistical Methods in Education and Psychology.** Statistical techniques for reducing, describing, and comparing data; sampling theory, correlation theory, tests of reliability, testing hypotheses; use of these techniques in test interpretation and educational research. Prerequisite: Psy. 463. 3 credits.
- 581 Psychology of Elementary School Teaching.** Recent investigations and reports in subject-matter areas; basic concepts and research in child development and implications for instruction. Prerequisite: Experience in elementary school teaching. 3 credits.
- 590 Appraisal Techniques.** Analysis of techniques in guidance and counseling. Information, sources, assembly, and use in counseling process. Prerequisite: Psychology 464-564. 3 credits.
- 591 Group Guidance Procedures.** Use in total guidance program for high school. Use of occupational and educational information materials. Prerequisite: Psychology 464-564. 3 credits.
- 592 Occupational and Educational Information.** Sources, evaluation, collection, and filing; proper use and place in total guidance program. Prerequisite: Psychology 464-564. 3 credits.
- 593 Counseling Procedures.** Various approaches to counseling; practice in interviewing; concepts of therapy; analysis of attitudes in counseling. Prerequisite: Psychology 590. 3 credits.
- 594 Supervised Practicum in Counseling.** Service in a program of counseling, testing, and related personnel work. Prerequisite: Psychology 593 and Department approval. 3 credits.
- 595 Organization and Administration of the Guidance Program.** Problems of organization and administration, interrelationships with administrative, teacher personnel, and other school functions. 3 credits.
- 596 Supervised Practicum in Rehabilitation Counseling.** Prerequisite: Psychology 593 and Department approval. 3 credits.

THE SCHOOL OF SCIENCE, LITERATURE AND ARTS

Robert H. Wick, Ph.D., Dean

Departments

Art
Biology
Chemistry
English
Economics
Foreign Languages
Geography
History
Mathematics
Music
Philosophy
Physics
Political Science
Speech and Dramatic Art
Sociology

Interdepartment Fields

Language Arts
Sciences
Social Sciences
Social Studies

SCHOOL OF SCIENCE, LITERATURE AND ARTS

Robert H. Wick, Dean

A free society can function well only in an enlightened one in which the individual citizen has an understanding of its diverse elements and is able to make sound judgments on the crucial issues facing it. In their inescapable role as citizens, specialists need a common platform of values and sensitivities, and a language for communication concerning common problems. Wide familiarity with science, literature and the arts, together with experience in depth in one or more fields, is a necessary requirement if the student is to become an effective person in our free way of life.

The fundamental goal of the School of Science, Literature and Arts is the well-rounded development of the individual who must in limited time gain those insights and skills which will make him a person of aesthetic sensitivity, social responsibility, scientific understanding, and psychological maturity. For in a word and in the final analysis it is always the man, the individual man, that counts — his human insight, his human understanding, his human judgment.

To this end the School of Science, Literature and Arts offers through its general education and liberal studies programs, experiences in reading, writing and speaking; it encourages students in the art of creative and original thinking by exposure to significant concepts, facts, and methods of work in the social studies, sciences, mathematics, literature, philosophy, and the fine arts.

The School of Science, Literature and Arts cooperates with the School of Education in the preparation of elementary and secondary school teachers and with the School of Business and Industry in the general education preparation of its students.

To facilitate the administration of the many activities, curricular and co-curricular, of the School of Science, Literature and Arts, fifteen departments have been organized, each under the leadership of a chairman. The programs offered by the departments are described in the section of the catalog devoted to the departments.

ARTS

Algalee P. Adams, Ed.D., Chairman

The primary purpose of the Art Department is the training of art teachers and supervisors on the elementary, junior high, and secondary levels. Preparation is also offered for the elementary teacher, the studio artist, and the student seeking enriched experiences through art.

Art is the expression of man's experience by which tolerance and understanding are improved. Maturity, discernment, and poise will characterize the individual who through alertness and intelligence, has developed an appreciation for the beautiful through creative efforts.

BACHELOR OF SCIENCE

Comprehensive Art Major (84)

- | | |
|--|--|
| 220 Introduction to Drawing (2) | 236 Crafts for Teachers (4) |
| 231 Introductory Design (3) | 245 Sculpture I (3) |
| 232 Intermediate Design (3) | 251 Art in the Elementary School (3) |
| 234 Advanced Design (3) | 336 Clay Work for Teachers (3) |
| 236 Crafts for Teachers (4) | 338 Advertising Art and Lettering (3) |
| 245 Sculpture I (3) | 339 Poster Making (1) |
| 251 Art in the Elementary School (3) | 340 Oil Painting I (3) |
| 260 Materials (2) | 343 Water Color Painting (2) |
| 320 Drawing (2) | 351 Art in the Secondary School (3) |
| 332 Interior Designs (3) | 431 History of Art (4) |
| 336 Clay Work for Teachers (3) | 432 History of Art (4) |
| 338 Advertising Art and Lettering (3) | 436 Printmaking (3) |
| 339 Poster Making (1) | 451 Art Curriculum and Supervision (4) |
| 340 Oil Painting (3) | |
| 343 Water Color Painting (2) | |
| 344 Figure Work (3) | |
| 349 Commercial Art (3) | |
| 351 Art in the Secondary School (3) | |
| 378 Crafts (2) | |
| 430 History of Art (4) | |
| 431 History of Art (4) | |
| 432 Modern Art (4) | |
| 436 Printmaking (3) | |
| 449 Mural Painting (3) | |
| 451 Art Curriculum and Supervision (4) | |
| 460 Advanced Ceramics I (3) | |
| Ind. Arts 169 Tools and Machines (1) | |
| Electives (7) | |

Minor (36)

- | |
|--------------------------------------|
| 220 Introduction to Drawing (2) |
| 231 Introductory Design (3) |
| 232 Intermediate Design (3) |
| 236 Crafts for Teachers (4) |
| 251 Art in the Elementary School (3) |
| 245 Sculpture I (3) |
| 336 Clay Work for Teachers (3) |
| 340 Oil Painting I (3) |
| 343 Water Color Painting (2) |
| 351 Art in the Secondary School (3) |
| 432 History of Art (4) |
| 436 Printmaking (3) |

Elementary Education Minor (24 or 36)

A minimum of one course in each of the following areas: drawing, design, crafts, clay, painting, printmaking, art history.

Major (48)

- | |
|---------------------------------|
| 220 Introduction to Drawing (2) |
| 231 Introductory Design (3) |
| 232 Intermediate Design (3) |

A student must complete Industrial Arts 169 in order to have permission to use the tools and machines in the Art Workshop.

BACHELOR OF ARTS

An outline for the requirements for a major or minor in Art can be obtained from the Chairman of the Art Department.

COURSE DESCRIPTIONS

- 121 Humanities.** Man as revealed by his expression through the visual arts. Includes architecture, painting, sculpture, and the minor arts. Lectures, discussions, movies, exhibits. 4 credits.
- 220 Introduction to Drawing.** Pictorial composition, problems in space division and three-dimensional representation. 2 credits.
- 230 Advanced Appreciation.** Experience with materials to enhance appreciation of the work of artists and to discover a potential interest or ability in art. 3 credits.
- 231 Introductory Design.** Creative activities through which the principles and introductory elements of design are discovered and used. 3 credits.
- 232 Design.** Fundamentals of visual design. Study of basic elements and principles through original compositions. Prerequisite: Art 231. 3 credits.
- 234 Advanced Design.** Prerequisite: Art 232. 3 credits.
- 236 Introductory Crafts for Teachers.** Experiences with various materials and techniques suitable for elementary and secondary schools, in relation to the creative needs of children. 4 credits.
- 239 Weaving.** Warping and weaving on floor and table looms. Reading of patterns. 2 credits.
- 245 Sculpture I.** Three-dimensional work in many materials, stone, wood, plaster, metal, etc., modeling, carving, and casting. 3 credits.
- 250 Principles of Art.** Developmental stages of artistic activity. Art media for each stage. Experience with art materials to develop confidence in the student's own creative approach, and the use of these materials in relation to creative needs. 3 credits.
- 251 Art in the Elementary School.** Analysis of a child's changing needs for artistic expression; parallel growth in creative and mental development; methods for different age levels and classroom situations. Prerequisite: 12 credits in Art. 3 credits.
- 260 Materials.** Experimentation with media suitable for elementary grades. 2 credits.
- 320 Drawing.** Practice in various techniques with different media such as charcoal, pen, pencil, and brush. 2 credits.
- 332 Interior Designs.** Emphasis on basic principles of good design in furnishing a home. Brief study of period furniture. 3 credits.
- 336 Clay Work for Teachers.** Methods of teaching ceramics. Creative experience in hand methods, glazing and firing. 3 credits.
- 338 Advertising Art and Lettering.** Lettering and calligraphy with experience with many tools and styles. Analysis of advertising layout in magazine, newspapers, television and other visual media. 3 credits.
- 339 Poster Making.** Practical problems in lettering and design as applied to advertising art. Historical survey of poster making. 1-4 credits.
- 340 Oil Painting I.** Nature of the various paints, surfaces, and styles of painting. Prerequisite: Art 220, 231. 3 credits.
- 341 Oil Painting II.** Oil painting and combined experimental media. Prerequisite: Art 340. 3 credits.
- 342 Oil Painting III.** Continuation of Oil Painting II with emphasis on development of individual expression and teaching techniques. Prerequisite: Painting I, II, Drawing 320, Design 232. 3 credits.
- 343 Water Color Painting.** Transparent water color painting, casein, tempera and combined media. 2 credits.
- 344 Figure Work.** Anatomy of the human body. Drawing and painting from models. 3 credits.
- 345 Sculpture II.** Continuation of Sculpture I. 3 credits.
- 349 Commercial Art.** Experience in illustrating and planning of brochures, pamphlets, advertisements, yearbooks, cards, showcards, posters, and displays. Prerequisite: Art 338. 3 credits.
- 351 Art in the Secondary School.** Analysis and demonstration of methods and tech-

- niques which develop confidence and skill in creative art activity during adolescence. Prerequisite: 12 credits in art or art education. 3 credits.
- 378 Crafts.** For majors and minors in art. Prerequisite: Art 232. 2 credits.
- 430 History of Art.** Great art of western man from the Paleolithic Era (20,000 B.C.) through 1300 A.D. Emphasis placed on aesthetic qualities of the architecture, painting and sculpture of this period. 4 credits.
- 431 History of Art.** A continuation of Art 430 beginning with the Renaissance (1400 A.D.) through 1800 A.D. 4 credits.
- 432 History of Art.** A continuation of Art 431 beginning with 1800 and progressing to the present. 4 credits.
- 434 Photography.** Analysis of the qualities of a good photograph. Experimentation with various subjects and techniques. Prerequisite: Art 232. 2 credits.
- 436 Printmaking.** Basic techniques in wood block printing, etching, and other processes. Prerequisite: Art 220 and 231. 3 credits.
- 437 Advanced Printmaking.** Intaglio, serigraphy, or lithography. 3 credits.
- 445 Analysis of Three-Dimensional Process in Art.** Wood, direct metal, stone; critical evaluation of student and professional sculpture. Prerequisite: Art 345 and 234. 3 credits.
- 446 Functional Relationships in Crafts.** Relationships of material, design and purpose in crafts discussed by means of outstanding products of different materials, periods and cultures. Prerequisite: 6 credits in crafts or 3 credits in design and 2 in advanced crafts. 3 credits.
- 449 Mural Painting.** Mural painting and its integration with teaching history, science, social studies or humanities. Planning and executing a mural for a definite purpose and location. 3 credits.
- 451 Art Curriculum and Supervision.** Selection and organization of subject matter, methods, materials, and techniques for teaching and supervision of art. 4 credits.
- 460 Advanced Ceramics I.** Turning on the potter's wheel, chemistry of glazes, exploration of experimental techniques. 3 credits.
- 461 Advanced Ceramics II.** Continuation of Art 460. 3 credits.
- 467 Advanced Woodcuts I.** Woodcut as an art form in both black and white and multiple colors. 3 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems.** A seminar or conference course for advanced students wishing to work out a special problem in Art. 1-4 credits.
- 439-539 Art in the U. S.** Painting, sculpture, architecture, and design in general from Colonial times to present. Special emphasis on local, Minnesota, and Midwest art and their particular problems. 4 credits.
- 453-553 Workshop in Elementary School Art.** Problems of teaching art and experimentation in various media and techniques. Adapted to individual needs of elementary school teachers. Prerequisite: Teaching experience. 4 credits.

COURSES FOR GRADUATE STUDENTS

- 535 Graphic Processes.** Printing methods: etching, lithography, silk screen, woodcuts, engraving, aquatint, mezzotint, drypoint, or others. Applications in teaching. Prerequisite: Art 436. 3 credits.
- 538 Great Masters of Painting.** Several artists of different periods and countries. Growth of each from early drawings to their mature style. 4 credits.
- 542 Painting.** Problems in painting, organization, color, and technique leading to development of a student's individual expression. Prerequisite: Art 342. 3 credits.
- 544 Advanced Studio Work.** Special problems in any of the following—oil painting, water color painting, sculpture, design, or commercial art. Prerequisite: Art 232 and Art 234 or equivalent. 4 credits.

- 550 Sculpture.** Sculpture in wood, stone, or direct metal. Three-dimensional processes analyzed with regard to form, kinetic, textural and other characteristics and functions. 3 credits.
- 557 Current Problems in Art Education.** Statement, analysis and evaluation of art problems evidenced in contemporary living, in school, home, and community. 3 credits.
- 559 Art for the Handicapped.** Development of creative art activity with the physically, mentally, emotionally, and socially handicapped; adjustive effect upon them. Prerequisite: 6 credits in Art Education, or 6 credits in Special Education, or 6 credits in Psychology. 3 credits.
- 562 Ceramics.** Turning on the potter's wheel, chemistry of glazes, and firing. Leading to development of the student's individual expression in ceramics as both a functional and aesthetic art form. Prerequisite: Art 460. 3 credits.
- 564 Design Laboratory.** Creative experimentation in many materials and critical analysis of result. Prerequisite: 232 and 234 or equivalent. 4 credits.
- 570 History of Art Education in Europe and America.** Historical development of philosophies in art education in the United States and Europe. Required of students working for a masters degree in art. 2 credits.
- 580 Research in Art Education.** Current experiments in art education and closely related fields. Required of students working for a masters degree in art. 2 credits.

BIOLOGY

Harold H. Hopkins, Ph.D., Chairman

Students interested in general science programs should refer to the interdepartment course offerings of Sciences on page of this bulletin.

BACHELOR OF SCIENCE

Comprehensive Biology Major (84)

Biol 349 Prin. Resource Management (4)
 Bot 245 General Botany (4)
 Bot 246 General Botany (4)
 Bot 247 Plant Taxonomy or Zool. 243
 Vertebrate Taxonomy (4)
 Chem 211, 212 General Chemistry (8)
 Chem 221 Organic Chemistry (4)
 Math 221 College Algebra (4)
 Math 224 Trigonometry (4)
 Phys 231 Mechanics (4)
 Phys 232 Magnetism and Elect. (4)
 Phys 233 Heat, Light, Sound (4)
 Science 453 Teaching Secondary (4)
 Zool. 241, 242 General Zoology (8)
 Electives in Biological Sciences (24) —
 Minimum of 12 credits at 400 level
 including Botany 441, Biology 448, or
 Zoology 451.

Biology Minor (36)

Botany 245-246 General Botany (8)
 Zoology 241-242 General Zoology (8)
 Biology 349 Principles of Resource
 Management (4)
 Botany 247 Plant Taxonomy or
 Zoology 243 Vertebrate Taxonomy (4)
 Electives in Biological Sciences (12)
 Minimum of 8 credits at 400 level in-
 cluding Botany 441, Biology 448, or
 Zoology 451.

Elementary Education Minor (24)

Zoology 241 General Zoology (4)
 Botany 245 General Botany (4)
 Botany 246 General Botany (4)
 Elect 3:
 Zoology 341 Entomology (4)
 Botany 345 Local Flora (4)
 Zoology 347 Ornithology (4)
 Biology 349 Prin. of Res. Mgt. (4)

BACHELOR OF ARTS

An outline of the requirements for a major or minor in Biology can be obtained from the Chairman of the department.

COURSE DESCRIPTIONS

The Biology Department consists of three sections: Biology, Botany, and Zoology.

BIOLOGY

- 101 Life and Environment.** Regional interpretation; familiarity with the living world; interrelationships in nature. Laboratory. 4 credits.
- 104 Human Biology.** Organization and general functioning of the human body; reproduction; heredity; evolution; social implications of biological principles. Laboratory. 4 credits.
- 326 Biological Sciences.** Concepts in biological sciences appropriate for the elementary school. Laboratory. 3 credits.
- 344 Microbiology.** Morphology, classification, and culture of bacteria and other microorganisms of economic importance. Laboratory. Prerequisite: Chemistry 211. 4 credits.
- 349 Principles of Resource Management.** Conservation of natural resources with emphasis on soil, water, forests, and wildlife. (May not be taken for credit if credit has already been received for Geography 372, Conservation of World Resources.) Laboratory. 4 credits.
- 350 Soils.** Origin, development, classification, plant relationships, physical and chemical properties. Laboratory. Prerequisites: Botany 245, Chemistry 211. 4 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems.** A seminar or conference course for advanced students wishing to work out a special problem in Biology. 1-4 credits.
- 402-502 Modern Biological Concepts.** General education course in which modern concepts in biology are developed through selected laboratory experience, reading, and discussion. Not open to students with majors or minors in biology. 3 credits.
- 409-509 Biological Techniques.** Collection, preparation, and display of biological materials. Laboratory. 2 credits.
- 443-543 Genetics.** Principles of inheritance and variation; application of genetic principles in improving domestic plants and animals; human inheritance and social problems. Laboratory. Prerequisite: 8 hours Biological Sciences. 4 credits.
- 445-545 General Physiology.** Cellular metabolic processes in relationship to total body functions. Laboratory. Prerequisite: Zoology 241 and Chemistry 211. 4 credits.
- 448-548 Aquatic Biology.** Lakes and streams, their physical environment, their plant and animal life, and the dynamic interrelations. Laboratory. Prerequisite: Zoology 242, Botany 246. 4 credits.
- 455-555 Workshop in Conservation and Conservation Education.** Wide range of experiences designed to help teachers plan and implement teaching of conservation: curriculum planning, group work, conferences, demonstrations, lectures, field trips, and evaluation of audio-visual aids. Conducted by the Departments of Biology and Geography. 4 credits.

COURSES FOR GRADUATE STUDENTS

- 547 Ecology Problems.** Individual study of biological aspects of a locality aiming at better understanding of biological resources and problems of community and their greater utilization in teaching. Laboratory. Prerequisite: Botany 441 or 541. 2 to 4 credits.
- 550 History of Biology.** Origin and development of major ideas of biological thought. Prerequisites: Botany 246, Zoology 242. 2 to 4 credits.

BOTANY

- 245 General Botany.** Introduction to entire field with emphasis on anatomy and physiology of higher plants. Laboratory. 4 credits.
- 246 General Botany.** Survey of plant kingdom with emphasis on life histories and morphology of lower plants. Laboratory. Prerequisite: Botany 245. 4 credits.

- 247 Plant Taxonomy.** Structure and terminology applied to plant classification; construction and use of keys; Minnesota flora. Laboratory. Prerequisite: Botany 246. 4 credits.
- 345 Local Flora.** Field characteristics and ecological distribution in the identification of Minnesota vascular plants. Laboratory. 4 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 440-540 Mycology.** Structure, development, and identification of fungi with emphasis on species of economic importance. Laboratory. Prerequisite: Botany 246. 4 credits.
- 441-541 Plant Ecology.** Relations between plants and their environment; field studies of plant communities and succession. Laboratory. Prerequisite: Botany 247. 4 credits.
- 446-546 Systematic Botany.** Advanced taxonomic principles; individual experience in collecting, pressing, identifying, and mounting flowering plants. Laboratory. Prerequisite: Botany 247. 2-4 credits.

ZOOLOGY

- 241 General Zoology.** Vertebrates, with emphasis on anatomy and physiology. Laboratory. 4 credits.
- 242 General Zoology.** Invertebrates, with emphasis on anatomy and physiology. Laboratory. Prerequisite: Zoology 241. 4 credits.
- 243 Vertebrate Taxonomy.** Principles of classification as applied to fishes, amphibians, reptiles, and mammals. Laboratory. Prerequisite: Zoology 241. 4 credits.
- 309 Histology.** Microscopic structure and related function of mammalian cells and tissues. Laboratory. Prerequisite: Zoology 241. 2 credits.
- 341 Entomology.** Morphology, physiology, and classification of common orders and families of insects. Laboratory. 4 credits.
- 342 Comparative Vertebrate Anatomy.** Development and structure of representative vertebrates. Dissection of cat and selected lower forms. Laboratory. Prerequisite: Zoology 241. 4 credits.
- 347 Ornithology.** Identification, field study and life histories of birds. Laboratory. 4 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 442-542 Embryology.** Prenatal development of human body; laboratory emphasis on chick and pig. Laboratory. Prerequisite: Zoology 242. 4 credits.
- 447-547 Animal Physiology.** Metabolic activities of organ systems with emphasis on human body. Laboratory. Prerequisites: Zoology 241, Chemistry 211. 4 credits.
- 451-551 Animal Ecology.** Distribution, life histories, habitat requirements, and environmental interrelations of vertebrates and invertebrates. Laboratory. Prerequisite: Zoology 243. 4 credits.

CHEMISTRY

Arthur F. Nelson, Ph.D., Chairman

Students interested in general or physical science programs should refer to the interdepartment course offerings of Sciences on page of this bulletin.

Comprehensive Chemistry Major (84)

Bot 245 General Botany (4)
 Chem 211 General Chemistry (4)
 Chem 212 General Chemistry (4)
 Chem 223 Qualitative Analysis (4)
 Chem 321 Organic Chemistry (4)
 Chem 322 Organic Chemistry (4)
 Chem 323 Organic Chemistry (4)
 Chem 325 Quantitative Analysis (4)
 Chem 425 Physical Chemistry (4)
 Chem 426 Physical Chemistry (4)
 Chem 427 Physical Chemistry (4)
 Math 221 College Algebra (4)
 Math 224 Trigonometry (4)
 Math 241 Analysis I (4)
 Math 242 Analysis II (4)
 Math 243 Analysis III (4)
 Phys 231 Mechanics (4)
 Phys 232 Magnetism and Electricity (4)
 Phys 233 Heat, Light, Sound (4)
 Science 453 Teaching Secondary (4)
 Zool 241 General Zoology (4)

Chemistry Minor (36)

211-212 General Chemistry (8)
 223 Qualitative Analysis (4)
 321-322 Organic Chemistry (8)
 325 Quantitative Analysis (4)
 425, 426, 427 Physical Chemistry (12)

Chemistry Minor (24)

211-212 General Chemistry (8)
 223 Qualitative Analysis (4)
 321-322 Organic Chemistry (8)
 Electives in Chemistry (Senior College) (4)

Elementary Education Minor (24)

Chem 211, 212 General Chemistry (8)
 Chem 321, 322 Organic Chemistry (8)
 Chemistry Electives
 Chem 223 Qualitative Analysis (4)
 Chem 323 Organic Chemistry (4)
 Chem 324 Physiological Chem (4)
 Chem 325 Quantitative Analysis (4)
 Chem 423 Qual. Org. Analysis (4)

CHEMISTRY

- 102 Concepts in Chemistry.** Basic chemical principles and concepts; impact of chemical discoveries on industry and society. Laboratory. 4 credits.
- 211 General Inorganic Chemistry.** Gases; liquids; solids; solutions; molecular, atomic, electronic, and ionization theories; valence; types of chemical reactions; reaction velocity and chemical equilibrium; chemical formulas and equations. Laboratory. 4 credits.
- 212 General Inorganic Chemistry.** Metals and nonmetals, including methods of production, properties, and uses; preparation, properties, and uses of their compounds. Laboratory. Prerequisite: Chemistry 211. 4 credits.
- 221 Organic Chemistry.** Introductory, especially for Biology students. The chemistry of carbon compounds. Principles underlying the classification, structure, uses, general properties. Laboratory. Prerequisite: Chemistry 212. 4 credits.
- 223 Qualitative Analysis.** Methods of isolation and identification of metallic and nonmetallic ions; solutions, precipitations, chemical equilibrium, and types of chemical reactions. Laboratory. Prerequisite: Chemistry 212. 4 credits.
- 321 Organic Chemistry.** Structure, isomerism, types of compounds, methods of syntheses, and practical applications. Laboratory. Prerequisite: Chemistry 212. 4 credits.
- 322 Organic Chemistry.** Aromatic compounds, amino acids, and proteins, and some heterocyclic compounds. Laboratory. Prerequisite: Chemistry 321. 4 credits.
- 323 Organic Chemistry.** Special reactions, behavior on basis of electron structure. Laboratory. Prerequisite: Chemistry 322. 4 credits.
- 324 Physiological Chemistry.** Chemistry of metabolism of plants and animals; chemistry of foods and regulatory substances such as hormones, enzymes, vitamins. Laboratory. Prerequisite: Chemistry 322. 4 credits.
- 325 Quantitative Analysis.** Essentials of volumetric and gravimetric methods employed in inorganic quantitative analysis. Laboratory. Prerequisite: Chemistry 223. 4 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems.** A seminar or conference course for advanced students wishing to work out a special problem in Chemistry. 1-4 credits.
- 411-511 Advanced Inorganic Chemistry.** Theoretical approach to, and aspects of, inorganic chemistry. Prerequisite: Two years of Chemistry. 4 credits.
- 421-521 Organic Chemistry.** Aliphatic, aromatic, and heterocyclic compounds of carbon. Open only to seniors and graduate students. Laboratory. 5 credits.
- 442-522 Quantitative Analysis.** Volumetric and gravimetric methods of greater complexity and finer techniques than those presented in 325; includes some instrumental analysis. Laboratory. Prerequisite: Chemistry 325. 4 credits.
- 423-523 Qualitative Organic Analysis.** Identification of several single and mixed organic compounds by physical and organic qualitative methods. Laboratory. Prerequisite: Chemistry 322. 4 credits.
- 425-525, 426-526, 427-527 Physical Chemistry.** Application of fundamental laws and theoretical principles to gases, liquids, solids, solutions, and colloids; mass law; phase rule; electrochemical problems. Laboratory. Prerequisite: Chemistry 325, Physics 232, 233 and Mathematics 242. 4 credits per quarter.

ECONOMICS

Carl J. Folkerts, Ph.D., Chairman

Students interested in Social Science or Social Studies programs should refer to the interdepartment course offerings as listed in this bulletin.

BACHELOR OF ARTS

Economics Major (48)

- Econ 272 Principles of Economics (5)
 Bus 241, 242 Principles of Accounting (8)
 Math 330 Statistics (4)
 Econ 372 Economic Problems (3)
 Econ 476 Economic Analysis (3)
 Econ 471 Money and Banking (4)
 Econ 478 History of Economic Thought (4)
 Three courses in college mathematics strongly recommended
 Electives (17) from the following:
 Econ 371 Public Finance (4)
 Econ 378 Agricultural Economics (2)
 Econ 379 Comparative Economic Systems (2)
 Econ 401 Banking and Fiscal Policy (4)
 Econ 470 Cycles and Forecasting (4)
 Econ 473 Labor Economics (4)
 Econ 474 International Economics (2)
 Econ 477 Business Economics (4)

- Soc. S. 472 Methods in Social Research (2)
 Hist 345 Economic History (4)
 Geog 271 Economic Geography (4)
 Bus 440 Business Finance (4)

Minor (24)

- Econ 272 Principles of Economics (5)
 Econ 372 Economic Problems (3)
 Econ 376 Economic Analysis (3)
 Econ 471 Money and Banking (4)
 Electives (9)

Elementary Education Minors (24 or 36)

- *Econ 272 Principles of Econ (5)
 *Econ 372 Economic Problems (3)
 *Econ 471 Money and Banking (4)
 Econ 371 Public Finance (4)
 *Econ 473 Labor Economics (4)
 Econ 379 Comparative Systems (2)
 Hist 345 American Economic (4)
 Geog 271 Economic Geography (4)
 24 hour minors select 8 hours and 36 hour minors 6 hours from Econ 378, Econ 376, Econ 474, Econ 478, Bus 419.

COURSE DESCRIPTIONS

- 259 Elementary Economics.** Terminal course in the fundamentals of economics. Not open to students majoring in Economics, Social Science, or Business Administration. May not be substituted for Economics 272. 4 credits.

- 272 Principles of Economics.** Modern economic society; nature of free enterprise system, income distribution, role of government, the pricing process under varying competitive conditions; composition of national income. Prerequisite: to all other advanced courses in economics. 5 credits.
- 371 Public Finance.** Role of government in the economy: public revenues and expenditures, tax systems, fiscal policy, and problem of public debt. Prerequisite: 272. 4 credits.
- 372 Modern Economic Problems.** Problems or areas of difficulty in our American economy and their possible solution; industrial concentration, decline of price competition, transportation developments, agriculture, and unemployment. Prerequisite: 272. 3 credits.
- 378 Economics of Agriculture.** Development of agricultural production and its problems in United States; scientific developments, organizations, programs, and legislation purposed to aid agriculture. Prerequisite: 272. 2 credits.
- 379 Comparative Economic Systems.** Descriptions of different economic organizational structures and control mechanisms. Prerequisite: 272. 2 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems in Economics.** A seminar or conference course for advanced students wishing to work out a special problem in economics. 1-4 credits.
- 401-501 Monetary, Banking, and Fiscal Policy.** Dynamics of flow of expenditures and income and their impact upon national income and price levels, with appropriate consideration of possible stabilization controls. Prerequisite: 272. 4 credits.
- 470-570 Business Cycles and Forecasting.** Factors causing fluctuations in national income and proposed methods of stabilization, with appropriate consideration of business forecasting techniques. Prerequisite: 272. 4 credits.
- 471-571 Money and Banking.** Monetary and banking system of United States; nature of bank credit, operation of the individual bank and its relation to banking system; Federal Reserve System, central bank policy and the relationship between bank credit, money, and price levels. Prerequisite: 272. 4 credits.
- 473-573 Labor Economics.** Labor as a factor of production; growth of collective bargaining and labor legislation, with their attendant effects upon society. Prerequisite: 272. 4 credits.
- 474-574 International Economics.** International economic relationships and their effects upon domestic and foreign economies. Commercial and financial policies; tariffs, exchange controls, international monetary standards, and institutions established to facilitate international settlements. Prerequisite: 272. 2 credits.
- 476-576 Economic Analysis.** Economic processes of free enterprise system; pricing under various conditions, capital formation, and theory of employment. Prerequisite: 272. 3 credits.
- 477-577 Business Economics.** Economic analysis as an aid in business management and control. Prerequisite: 272. 4 credits.
- 478-578 History of Economic Thought.** Development of economic thought and analysis from Adam Smith to the present. Prerequisite: 272. 4 credits.
- 481-581 Seminar.** Selected topics in economic theory. Prerequisite: Consent of department. 1-4 credits.

ENGLISH

Paul E. Cairns, Ph.D., Chairman

The purposes of the Department of English are three: first, in the Communication program to help all students of the college to achieve proficiency in writing and speaking; second, in introductory literature, to help them to develop a critical appreciation for content and form; third, in advanced courses, to prepare English majors and minors for teaching and graduate study.

The Department of English consists of four sections: **English, General Education Communication courses, Library Science, Journalism.**

GENERAL EDUCATION COMMUNICATION SEQUENCES

Communication courses in General Education are organized into the following sequences:

- Sequence A:** Twelve hours (Speech 161, English 162, English 263) for students who demonstrate average college-level proficiency in writing or speaking.
- Sequence B:** Sixteen hours (English 062, Speech 161, English 162, English 263) for students whose diagnostic evaluation indicates deficiencies in written composition. Credit in English 062 is not applicable toward graduation.
- Sequence C:** Twelve hours (Speech 171, English 172, and English 273 or 274) for students whose diagnostic evaluation indicates ability to profit from an enriched program.
- Sequence D:** Eight hours (Speech 161 or 171, and English 263, 273, or 274) for students of outstanding ability in writing but in need of further work in basic speaking skills. English 162 or 172 is waived for these students.
- Sequence E:** Eight hours (English 162 or 172, and English 263, 273, or 274) for students of outstanding ability in speaking but in need of further work in basic writing skills. Speech 161 or 171 is waived for these students.
- Sequence F:** Four hours (English 273 or 274) for students of outstanding ability in both writing and speaking. The freshman level courses in Communication are waived for these students.

The courses in writing and speaking at the freshman level need not be taken in sequence. However, students recommended for English 062 must complete that course with at least a C before taking English 162. The freshman level courses must be completed with at least a C in each, or waived, before students take the sophomore level courses (English 263, 273, or 274).

Every student must have a C average in the Communication sequence before he will be allowed to apply for student teaching or be graduated. The freshman level courses in Communication must be completed or waived before a student's Application for Admission to a Major Program of Study will be approved.

BACHELOR OF SCIENCE

The Language Arts Major, designed to give a broad background for a prospective English teacher, is listed with interdepartmental offerings in this bulletin.

English

Major (48)

- 331 Advanced Composition (2)
- 333 The English Language (4)
- 334 Descriptive Grammar (4)
- 343 Shakespeare (4)
- 401 Literary Theory and Criticism (3)
- 452 Language Arts Methods (4)
 - 5 period courses in English or
 - Recent European Literature (15)
 - 3 period courses in American Literature (9)
 - Elective in English (3)

Minor (36)

- 331 Advanced Composition (2)
- 334 Descriptive Grammar (4)

- 343 Shakespeare (4)
- 452 Language Arts Methods (4)
 - 4 period courses in English Literature (12)
 - 2 period courses in American Literature (6)
 - Elective in English (4)

Elementary Education Minor (36)

- 331 Advanced Composition (2)
- 333 The English Language (4)
- 343 Shakespeare (4)
 - 4 period courses in English Literature (12)
 - 2 period courses in American Literature (6)
 - Electives in English (8)

BACHELOR OF ARTS

An outline of the requirements for a major or minor in English can be obtained from the Chairman of the Department of English.

COURSE DESCRIPTIONS**GENERAL EDUCATION COMMUNICATION COURSES**

(Also see Speech Department for description of Speech 161 and 171)

- 062 Remedial Written Composition.** For those students whose diagnostic evaluation indicates deficiencies in written composition. Instruction based on student's individual difficulties. Successful completion of the course permits student to enter Communication 162. Credits not applicable toward graduation. 4 credits.
- 162 Written Composition.** Common principles and practices of written composition. Organization of ideas for expository and argumentative writing. Reading and analysis of significant expository materials. Language concepts. The research paper. 4 credits.
- 172 Written Composition.** Open only to those students whose diagnostic evaluation indicates ability to profit from an enriched program. Practice in written composition. Reading and analysis of significant expository and imaginative materials. Language concepts. Organization of ideas. Exposition. Argumentation. Creative writing. Research paper. 4 credits.
- 263 Communication: Mass Media.** Mass communication media and their influence in modern society. Further exploration of logical and semantic principles to help students develop standards and techniques of critical analysis, aesthetic enjoyments, and intelligent selection in their use of the media. 4 credits.
- 273 Communication: Mass Media.** For those students who could profit from an enriched program. Mass communication media and their influence in modern society. Standards and techniques of critical analysis, aesthetic enjoyment and intelligent selection in the use of the media. Experiments in creative writing in newer media. 4 credits.
- 274 Communication: Literature.** For those students who could profit from an enriched program. Examination of modern writing and speaking as a reflection of contemporary society and as a shaper of contemporary attitudes and manners. Development of standards for intelligent selection and appreciation of literature. 4 credits.

ENGLISH

- 124 Humanities.** Various types of imaginative literature—short story, novel, poetry, and drama—designed to foster discriminating judgment in reading. 4 credits.
- 134 Humanities.** An enriched course for those students whose backgrounds and test scores indicate their ability to profit from a more advanced and intensive study of the various types of literature—short story, novel, poetry, and drama. Opportunity provided for original writing in one or several of the literary forms. 4 credits.
- 251 Children's Literature.** Types of literature suitable for recreational reading in elementary grades, standards for selecting materials, effective methods of presentation. Story-telling, dramatization, and teaching of poetry. Observation in Campus School. 4 credits.
- 270 The Renaissance (English).** The New World, the New Learning, the Reformation, Humanism; Tudor poets, dramatists, essayists, and travellers. 3 credits.
- 272 The Romantics (English).** The return of emotion, imaginative vision, and wonder; Blake, Wordsworth and mysticism; Coleridge and the supernatural; Byron, Shelley, and Keats and the revolutionary spirit. 3 credits.
- 276 The Victorians (English).** The neo-classical return to order and discipline, the search for truth and balance; the poetry of Tennyson, Browning, Arnold; the prose of Carlyle, Ruskin, Huxley; introduction to drama and novel. 3 credits.

- 285 Recent European Literature.** Works of selected major authors in translation; literary movements and forms. 3 credits.
- 290 Establishment of a National Literature (American).** The rise of American literary forms: Franklin, Irving, Bryant, Cooper, Poe, and selected authors of the colonial period. 3 credits.
- 292 Realism and Naturalism in American Literature (American).** Literary trends and writers from Whitman and Mark Twain to James. 3 credits.
- 331 Advanced Composition.** Exposition. Significant aspects of observing and reporting and of the writing of primary and secondary source papers. 2 credits.
- 332 Advanced Composition.** Narration and description. Emphasis on creative writing. 2 credits.
- 333 The English Language.** Scientific and historical study of English as it applies to modern communication. Required of English majors. 4 credits.
- 334 Descriptive Grammar.** Scientific treatment of language. Current linguistic fact and its application to grammatical categories and concepts. 4 credits.
- 343 Shakespeare.** Introduction to histories, comedies, and tragedies. Required of English majors and minors. 4 credits.
- 353 Adolescent Literature.** Types of literature suitable for recreational reading in junior and senior high school, standards for selecting materials, methods of presentation, bibliography. 3 credits.
- 357 Teaching of Language Arts in Elementary School.** Nature and scope of an adequate program in language arts. Designed for majors in elementary field. 4 credits.
- 380 The Medieval Period (English).** Introduction to the literature and language of the Old and Middle English Periods: Beowulf, Chaucer, Langland, Malory, and the anonymous poets and playwrights. 3 credits.
- 382 The Seventeenth Century (English).** John Donne and the metaphysical followers; Ben Jonson and the classical school; introduction to Dryden, Milton, and Restoration Drama. 3 credits.
- 384 The Eighteenth Century (English).** The Age of Reason and Discipline: Pope and the Augustans, Samuel Johnson and his circle; Goldsmith, Sheridan and the Revival of Comedy. 3 credits.
- 386 The Twentieth Century (English).** Chroniclers of conflict and change: Yeats, Joyce, Lawrence, Huxley, and the later poets and writers of fiction. 3 credits.
- 390 Modern American Literature (American).** Literary trends and writers from World War I to the present. 3 credits.
- 452 Teaching of Language Arts in High School.** Methods of teaching an integrated course in English literature and usage. Open only to juniors and seniors. 4 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems.** A seminar or conference course for advanced students wishing to work out a special problem in English. 1-4 credits.
- 401-501 Literary Theory and Criticism.** Concepts which apply to such problems as the writer's creative process, the various purposes of literary art, form and technique, and the responses that literature elicits. A selected reading of the great critical works, old and new, which influence man's relationship with literature. Designed to develop critical competence for literary scholarship and teaching. 3 credits.
- 420-520 World Literature.** Great works from the Classical Period to the present. Emphasis on the Western World. 4 credits.
- 430-530 Chaucer.** The Canterbury Tales and other narratives in Middle English. 4 credits.
- 434-534 Business and Professional Communication Skills.** Content, form, and style of written and oral English. Organization, presentation, precise and summary writing, reports, prepared talks, discussion, leadership, and listening. (Not acceptable in lieu of regularly required communication courses.) 4 credits.

- 436-536 Structural Linguistics.** Advanced studies of sounds, sentence structure, inflections, and vocabulary. Prerequisite: English 333 or 334. 4 credits.
- 440-540 Milton and Dryden.** Prose, poetry, and drama of the Age of Controversy. 4 credits.
- 441-541 The Novel.** Critical and historical studies in the 19th and 20th Century novel, chiefly British and American. 4 credits.
- 460-560 The American Renaissance (American).** Transcendentalists and their critics: Emerson, Thoreau, Hawthorne, Melville, Longfellow, and related authors. 3 credits.
- 491-591 Drama: The Beginnings to Ibsen.** World drama, its origin and genesis. Primitive drama. Classical Greek and Roman, Oriental, Medieval, Elizabethan, Neo-classic, French, Restoration, Eighteenth Century, to 1875. 4 credits.
- 492-592 The Modern Drama: Ibsen to World War II.** Literature and production techniques of the modern theatre. 4 credits.
- 493-593 Contemporary Drama.** Trends in literature and production techniques of present-day world theatre. 4 credits.
- 495-595 Speech and English Workshop.** For advanced students in English and Speech. Area limited and specific subjects selected before the opening of the summer session. 3-8 credits.

COURSES FOR GRADUATE STUDENTS

- 515 Introduction to Research.** Evaluating research procedures and interpreting findings. Defining and delimiting a problem, efficient gatherings and proper documentation of data, organization and presentation of findings in acceptable form. 3 credits.
- 535 Advanced Experimental Writing.** Individual or group projects in traditional and contemporary forms: essay, fiction, poetry, and drama. 4 credits.
- 538 American Studies.** Intensive examination of the works of selected American authors. 2-4 credits.
- 543 Shakespeare Studies.** Text and sources, theories, and history of representative comedies, tragedies, and histories. 4 credits.
- 549 Contemporary Studies.** Analysis of literary thought, to provide opportunity to explore thoroughly works of selected writers. 4 credits.
- 552 Language Arts Problems.** Latest trends in language arts teaching and course organization. Application to specific problems of class members, with emphasis on individual research. Prerequisite: English 452 or equivalent. 4 credits.
- 599 Master's Project.** 3 credits.

JOURNALISM

A student wishing to prepare for teaching in this area may take the Language Arts Major with a Journalism Emphasis (see page).

COURSE DESCRIPTIONS

- 211 Editing the College Yearbook.** Lecture and laboratory in layout, copywriting, and editing of the college yearbook. One hour lecture, two hours laboratory. 2 credits.
- 213 Editing the College Newspaper.** Lecture and laboratory in reporting, editing, copyreading, and makeup of a college newspaper. Two hours lecture, two hours laboratory. 3 credits.
- 248 Reporting and News Writing.** Gathering material and writing news reports, interviews, and other types of news stories. Practice in covering assignments and preparing copy. 4 credits.
- 344 Editing and Makeup.** Principles and practices of copyreading, headline writing, illustrations and makeup for newspapers. 3 credits.

- 348 Editorial Writing.** Logical organization and principles of persuasion. The column, critical review, letters to the editor, and other materials of the editorial page. 2 credits.
- 441 Magazine Article Writing.** Writing feature articles for newspapers, magazines, and professional journals. Markets, slanting articles to meet needs of specific publications. 2 credits.
- 446 Communication Media.** Basic concepts of press freedom and responsibility, and their application to mass communication media today; materials and methods for media study in high school. 3 credits.
- 449 School Public Relations.** Interpreting the school for its various publics. Responsibilities of the teacher in relations with the community. Over-all public relations program; school news bureau as clearing house for publicity. 3 credits.
- 455 High School Newspaper.** Role of faculty adviser in supervising. Methods of teaching; content of journalism elective in high school curriculum. 3 credits.
- 456 High School Yearbook.** Role of faculty adviser in supervising. 2 credits.

LIBRARY SCIENCE

An important function of the library is the preparation of school librarians. This it does through the courses in the Library Science minor outlined by the State Department of Education and offered to upperclassmen in both elementary and secondary curriculums.

BACHELOR OF SCIENCE

Minor (24)

In addition to this minor field there is an Emphasis in Library Science which is listed with the Language Arts Major, page .

- | | |
|---|--|
| 376 Materials for the Secondary School Library (4) | 476 Secondary School Library Collection (4) |
| 377 Functions of the School Library (4) | 477 School Library in the Reading Program (4) |
| 378 Materials for the Elementary School Library (4) | 478 Use of Materials in the Elementary School Library (2) |
| | 479 Functions of the School Library (2) (including observation and practice) |

COURSE DESCRIPTIONS

- 376 Materials for Secondary School Library.** Books to correlate with school program, reference books, pamphlets, periodicals, audio-visual materials. Recommended sources and criteria of selection. Cataloguing and classification, with laboratory work. Emphasis on social studies. 4 credits.
- 377 Functions of School Library.** Objectives, methods, evaluation of school library services; standards, annual reports, planning program. Budget, housing, staff, circulation procedures. Field trips. 4 credits.
- 378 Materials for Elementary School Library.** Books to correlate with school program in all subject fields, standard classics, reference tools, pamphlets, magazines, audio-visual materials. Recommended sources and criteria of selection. 4 credits.
- 476 Secondary School Library Collection.** Books and other materials in subject areas other than social studies. Prerequisite: Library Science 376. 4 credits.
- 477 School Library in Reading Program.** Purpose of reading, reading interests at different age levels, reading guidance techniques. Reading and study of books and materials to fill these basic interests. Prerequisite: Library Science 376, 377, 378, 476. 4 credits.
- 478 Use of Materials in Elementary School Library.** Correlation of library materials with curriculum and recreational reading. Individual problems. Prerequisite: Library Science 378. 2 credits.
- 479 Functions of School Library.** Laboratory course designed to give practical experience in conducting a school library. Prerequisite: Library Science 376, 377, 378, 476. 2 credits.

FOREIGN LANGUAGES

Martha G. Worthington, Ph.D., Chairman

Acquiring a foreign language is in itself a widening of the student's mental horizon. Moreover, with the increasing emphasis on foreign languages in the elementary and secondary schools and in college, there is a corresponding increase in the demand for language teachers; and with the availability abroad of business and military posts, there are more opportunities for the proficient language student who does not elect to teach.

BACHELOR OF SCIENCE

FRENCH

Major (36)

- 231, 232, 233 Intermediate (12)
- 331, 332, 333 Survey of French Literature (12)
- 341 Form and Style in French Literature (4)
- 342 Conversation and Composition (4)
- 353 French for Classroom Teachers (3)
- 354 The Teaching of Modern Foreign Languages (1)

Minor (24)

- 231, 232, 233 Intermediate (12)
- 353 French for Classroom Teachers (3)
- 354 The Teaching of Modern Foreign Languages (1)
- Electives in 300 or 400 courses (8)

Elementary Education Minor (24)

- 231, 232, 233 Intermediate (12)
- Electives in 300 or 400 courses (12)

GERMAN

Major (36)

- 231, 232, 233 Intermediate (12)
- 331, 332, 333 Survey of German Literature (12)
- 341 Form and Style in German Literature (4)
- 342 Conversation and Composition (4)
- 353 German for Classroom Teachers (3)
- 354 The Teaching of Modern Foreign Languages (1)

Minor (24)

- 231, 232, 233 Intermediate (12)
- 353 German for Classroom Teachers (3)
- 354 The Teaching of Modern Foreign Languages (1)
- Electives in 300 or 400 courses (8)

Elementary Education Minor (24)

- 231, 232, 233 Intermediate (12)
- Electives in 300 or 400 courses (12)

SPANISH

Major (36)

- 231, 232, 233 Intermediate (12)
- 340 Conversation and Composition (4)
- 353 Spanish for Classroom Teachers (3)
- 354 The Teaching of Modern Foreign Languages (1)
- Electives in Literature courses (16)

Minor (24)

- 231, 232, 233 Intermediate (12)
- 353 Spanish for Classroom Teachers (3)
- 354 The Teaching of Modern Foreign Languages (1)
- Electives in 300 or 400 courses (8)

Elementary Education Minor (24)

- 231, 232, 233 Intermediate (12)
- Electives in 300 or 400 courses (12)

BACHELOR OF ARTS

An outline of the requirements for a major or minor in Foreign Languages can be obtained from the Chairman of the Foreign Language Department.

COURSE DESCRIPTIONS

FRENCH

131, 132, 133 Elementary French. French grammar and diction, simple reading, composition, and conversation based on French civilization. Less than one

year's credit will not apply on degree. Not to be counted on a French major or minor. Three hours class, two hours laboratory. 12 credits.

- 231, 232, 233 Intermediate French.** Thorough grammar review. Extensive reading of moderately difficult French. Practice in conversation and composition. Open to those who have had two years of French in high school or one year in college. Must be taken in sequence. 12 credits.
- 331 Survey of French Literature.** Middle Ages and Renaissance. 4 credits.
- 332 Survey of French Literature.** Seventeenth and eighteenth centuries. 4 credits.
- 333 Survey of French Literature.** Nineteenth and twentieth centuries. 4 credits.
- 341 Form and Style in French Literature.** Selected examples of prose, poetry, and drama studied in detail as works of art. 4 credits.
- 342 Conversation and Composition.** Discussion, oral reports, controlled and free composition, on subjects drawn from a study of modern French culture. 4 credits.
- 353 French for Classroom Teachers.** Materials for class and extracurricular use, and practice in presenting them. Must be taken concurrently with French 354. Required for student teaching. Prerequisite: 8 credits in French at 300 level. 3 credits.
- *354 The Teaching of Modern Foreign Languages.** Objectives and procedures in classroom and laboratory. Must be taken concurrently with French 353. 1 credit.
- 401 Phonetics.** Phonology of French, phonetic transcription, and practice in pronunciation. Prerequisite: French 231, 232, 233, or equivalent. 3 credits.
- 441 French Civilization.** Studies in the history and culture of France, taught in French. Prerequisite: 12 credits in French at 300 level. 4 credits.
- 495-595 Foreign Language Workshop.** Area limited and specific subjects selected before the opening of the summer session. 3-8 credits.

*French 354, German 354, and Spanish 354 are the same course, taught in English. A student with a major or minor combination in two languages may register for 354 only once, under one language designation.

GERMAN

- 131, 132, 133 Elementary German.** German grammar and pronunciation in connection with graded reading material and simple conversation, based on everyday life and present day Germany. Less than one year's credit will not apply on degree. Not to be counted on a German major or minor. Three hours class, two hours laboratory. 12 credits.
- 231, 232, 233 Intermediate German.** Continuation of elementary course, including review of fundamentals and more advanced reading in German literature. Open to those who have had two years of German in high school or one year in college. Must be taken in sequence. 12 credits.
- 331 Survey of German Literature.** From the Middle Ages to the classical period. 4 credits.
- 332 Survey of German Literature.** From the classical period to the present. 4 credits.
- 333 Survey of German Literature.** Goethe's *Faust*. 4 credits.
- 341 Form and Style in German Literature.** Epic, prose, lyric poetry, drama. 4 credits.
- 342 Conversation and Composition.** Discussion of contemporary topics; writing of reports, themes, and letters. 4 credits.
- 353 German for Classroom Teachers.** Materials for class and extracurricular use, and practice in presenting them. Must be taken concurrently with German 354. Required for student teaching. Prerequisite: 8 credits in German at 300 level. 3 credits.
- *354 The Teaching of Modern Foreign Languages.** Objectives and procedures in classroom and laboratory. Must be taken concurrently with German 353. 1 credit.

- 441 German Civilization.** Studies in the history and culture of Germany, taught in German. Prerequisite: 12 credits in German at 300 level. 4 credits.
- 495-595 Foreign Language Workshop.** Area limited and specific subjects selected before the opening of the summer session. 3-8 credits.

SPANISH

- 131, 132, 133 Elementary Spanish.** Spanish grammar. Reading of easy Spanish. Elementary composition and conversation based on Spanish and Spanish-American life. Less than one year's credit will not apply on degree. Not to be counted on a Spanish major or minor. Three hours class, two hours laboratory. 12 credits.
- 231, 232, 233 Intermediate Spanish.** Review of Spanish grammar. Extensive reading of moderately difficult Spanish. Composition and conversation based on Spanish and South American life. Open to those who have had one year of college or two years of high school Spanish. Must be taken in sequence. 12 credits.
- 331 Survey of Spanish Literature.** Middle Ages, Renaissance, Siglo de Oro. 4 credits.
- 332 Survey of Spanish Literature.** Eighteenth century, Romanticism, Realism. 4 credits.
- 333 Survey of Spanish Literature.** The generation of 1898 to the present. 4 credits.
- 340 Conversation and Composition.** Discussion, oral reports, controlled and free composition, on subjects drawn from Spanish and Spanish-American culture. 4 credits.
- 341 Readings in Spanish-American Literature.** From the colonial period to the early nineteenth century. 4 credits.
- 342 Readings in Spanish-American Literature.** The nineteenth and twentieth centuries. 4 credits.
- 353 Spanish for Classroom Teachers.** Materials for class and extra-curricular use, and practice in presenting them. Must be taken concurrently with Spanish 354. Required for student teaching. Prerequisite: 8 credits in Spanish at 300 level. 3 credits.
- *354 The Teaching of Modern Foreign Languages.** Objectives and procedures in classroom and laboratory. Must be taken concurrently with Spanish 353. 1 credit.
- 441 Spanish Civilization.** Studies in the history and culture of Spain, taught in Spanish. Prerequisite: 12 credits in Spanish at 300 level. 4 credits.
- 451 Latin American Civilization.** Studies in the history and culture of Latin America, taught in Spanish. Prerequisite: 12 credits in Spanish at 300 level. 4 credits.
- 495-595 Foreign Language Workshop.** Area limited and specific subjects selected before the opening of the summer session. 3-8 credits.

RUSSIAN

- 131, 132, 133 Elementary Russian.** Russian grammar and diction, simple reading, written and oral communication based on contemporary Russian civilization. Less than one year's credit will not apply on degree. 12 credits.
- 231, 232, 233 Intermediate Russian.** Continuation of first year course, including review of fundamentals. Reading in Russian Literature. Practice in written and oral communication. Must be taken in sequence. 12 credits.

*French 354, German 354, and Spanish 354 are the same course, taught in English. A student with a major or minor combination in two languages may register for 354 only once, under one language designation.

GEOGRAPHY

Robert H. Brown, Ph.D., Chairman

BACHELOR OF SCIENCE

Students interested in social studies programs with emphasis in Geography should refer to the interdepartment course offerings as listed in the Social Sciences and Social Studies.

Geography Major (48)

A minimum of four topical courses and four regional courses in Geography is required (36)

Teaching of Secondary Social Studies 353 (4)

Electives in two departments of Social Sciences other than in the Geography department (8)

Geography Minor (36)

A minimum of three topical courses and three regional courses in Geography is required (24)

Teaching of Secondary Social Studies 353 (4)

Electives in two departments of Social Sciences other than in the Geography department (8)

Elementary Education Minor (24)

Minimum of:

3 Topical courses

2 Regional courses

The minor must be composed of three 200 level, two 300 level, and one 400 level courses.

Elementary Education Minor (36)

Minimum of:

4 Topical courses

4 Regional courses

The minor must be composed of three 200 level, three 300 level, and three 400 level courses.

BACHELOR OF ARTS

An outline of the requirements for a major or minor in Geography can be obtained from the Chairman of the Geography Department.

COURSE DESCRIPTIONS

- 171 Regional Human Geography.** Fundamental concepts necessary for geographic thinking. Understandings of climatic patterns. Emphasis on relationships. 4 credits.
- 271 Economic Geography.** Types of industries. Emphasis on methods, practices, and relationships. Topical. 4 credits.
- 273 Physical Geography.** Origin, history, and rock structure of the earth; processes and agents at work in changing the earth; fundamentals of climate, natural vegetation, soils, and water. Topical. 4 credits.
- 275 Geography of North America.** Regional treatment, with dominant activities as core of each. Appreciation of the continent. Regional. 4 credits.
- 277 Geography of South America.** Physical geography, resources, and people of various regions in each South American country related to economic stage and to possibilities of future development. Regional. 4 credits.
- 370 Geography of Southern Asia.** Areas not a part of the USSR. Problems and adjustments. Practices in relation to density of population. Regional. 4 credits.
- 372 Conservation of World Resources.** Conservation movement and its expression in conservation policies and activities. Supply, use, and management of natural resources, their planned development and use for the greatest benefit of man. (May not be taken for credit if credit has already been received for Science 349, Principles of Resource Management.) Topical. 4 credits.
- 374 Geography of Europe.** Regional treatment of areas not dominated by the USSR. Interpretation of economic conditions. Regional. 4 credits.
- 376 Geography of Minnesota.** Regional treatment of the geography of Minnesota, including distribution of surface features, natural resources, climatic differences, crops, and man. Regional. 3 credits.

- 378 Geography of the USSR.** Physical, cultural, economic, historical and political study of geography of the land and peoples now a part of the USSR. Geographic analysis of Russia's strength and weaknesses; limited regional work. Regional. 4 credits.
- 388 Australia and New Zealand.** Regional study of those two parts of the world from standpoint of human response to environment. Regional. 2 credits.
- 471 Historical Geography.** Geographic factors acting upon discovery and settlement of North America to 1890. Topical. 4 credits.
- 497 Geography of Polar Regions.** Arctic and Antarctic areas, their discovery, environment, human adjustment, and relationships to present world problems. Regional. 3 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems in Geography.** A seminar or conference course for advanced students wishing to work out special problems in geography. 1-4 credits.
- 401-501 Research or Readings in Topical Geography.** A seminar or conference course for students wishing to work on some phase of this subject. Credits and hours arranged. 1-4 credits.
- 402-502 Research or Readings in Regional Geography.** A seminar or conference course for students wishing to work on the geography of a particular region. Terms and hours arranged. 1-4 credits.
- 405-505 Cartography.** Map making and construction. Work with map making tools on problems of universal as well as individual interest. Topical. 4 credits.
- 474-574 Meteorology-Climatology.** Atmosphere, weather, instruments used in gathering climatic data, weather maps and weather forecasting. Topical. 4 credits.
- 476-576 Geography of Africa.** Physical geography, resources and people of the various regions of Africa related to economic stage and possibilities for future development. Regional. 4 credits.
- 480-580 Agricultural Geography.** World areal differences in crop, livestock, and technological patterns. Special emphasis on farming in the United States. Topical. 4 credits.
- 486-586 Political Geography.** Geographical strengths and weakness of the Great Powers which influence political changes in the world today. An elective in Political Science. Topical. 4 credits.
- 489-589 Development of Geographic Thought.** Main currents from ancient Greece to the present. Basic ideas behind the division of geography into regional and systematic categories. Topical. 4 credits.
- 490-590 Urban and Transportation Geography.** Geographic causes for growth and demise of the world's trade cities and trade routes. Particular attention to various kinds of carriers of world and American trade. Topical. 4 credits.
- 498-598 Geography of Middle America.** Geographic analysis of Mexico, Central American countries, and West Indian Islands. Regional. 4 credits.

HISTORY

Calvin W. Gower, Ph.D., Chairman

BACHELOR OF SCIENCE

Students interested in social studies programs with emphasis in History should refer to the interdepartment course offerings as listed in the Social Sciences and Social Studies.

History Major (48)

A minimum of one course in each of the four fields of Ancient, Medieval, Modern European, and American History is required (36)

Teaching of Secondary Social Studies 353 (4)

Electives in two departments of Social Sciences other than in History department (8)

History Minor (36)

A minimum of one course in each of the four fields of Ancient, Medieval, Modern European, and American History is required (24)
 Teaching of Secondary Social Studies 353 (4)
 Electives in two departments of Social Sciences other than in History department (8)

Elementary Education Minor (24)

Hist 242 or 243 American (4)

Hist 244 or 245 Modern European (4)
 Electives in 300 or 400 level History courses (16)

Elementary Education Minor (36)

Hist 242 or 243 American (4)
 Hist 244 or 245 Modern European (4)
 Elective in 200 level History course (4)
 Electives in 300 and 400 level History courses (16)
 Electives in two of the following departments: Econ, Geog, Pol Sci, Soc. (8)

BACHELOR OF ARTS

An outline of the requirements for a major or minor in History can be obtained from the Chairman of the department.

COURSE DESCRIPTIONS

- 141 United States in the Modern Age.** Documentary and interpretive study of selected topics in Modern United States history — Civil War to the present. 4 credits.
- 142 Europe in the Modern Age.** Documentary and interpretive study of selected topics in Modern European history. 4 credits.
- 242 American History, 1783-1860.** Confederation government; constitutional and Federalist era; Jeffersonian and Jacksonian Democracy; territorial expansion and the slavery issue. 4 credits.
- 243 American History, 1860-1900.** Civil War and Reconstruction; developments and adjustments resulting from growth of industry. 4 credits.
- 244 Modern European History, 1500-1763.** Renaissance and Reformation; rise of national states. 4 credits.
- 245 Modern European History, 1763-1914.** Revolutionary nationalism and decline of absolutism; Industrial Revolution and Imperialism. 4 credits.
- 314 Medieval History.** Survey of medieval world from approximately 4th to 16th century, with emphasis on influences of Roman world, its own unique development, and contributions to modern times. 3 credits.
- 321 Latin American History.** Appraisal of development of Spanish civilization in western hemisphere from time of Columbus to present. 4 credits.
- 331 Ancient World.** Social, cultural, economic, and political development of ancient nations; half about Babylonians, Egyptians, Persians, Assyrians, Hittites, Phoenicians, and Hebrews and half about Greece and Rome. 4 credits.
- 334 History of Russia.** From 9th century to end of World War I. Evolution of Russia's distinctive social, economic, and political institutions. Russia's position in relation to Western Europe and Asia. 4 credits.
- 335 English History.** Evolution of democracy under parliamentary system; British imperialism; economic, social, and cultural developments. 4 credits.
- 339 History of Modern France.** France from the French Revolution to the present; emphasis on historical development of contemporary French institutions, culture, and ideas. 3 credits.
- 345 American Economic History.** Colonial times to present, with concentration on economic factors and development in our change from a colonial agricultural economy to present industrial state. An elective in Economics. 4 credits.
- 346 Minnesota History.** Survey of the entire field of Minnesota history, based largely on publications of the Minnesota Historical Society. 3 credits.
- 347 History of Far East.** Westernization of China and Japan during 19th century which led to their becoming participants in world affairs. 3 credits.
- 348 History of Modern Germany.** Germany's rise from a nonpolitical entity to a powerful state; emphasis on historical development of German culture and thought; nationalism, militarism. 3 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems in History.** A seminar or conference course for advanced students wishing to work out a special problem in any area in history. 1-4 credits.
- 418-518 American Colonial History.** Development of Colonial institutions: religious, economic, and political, and their influence on the Revolution. 3 credits.
- 436-536 Middle East.** National, religious, and geographic forces which have made this area a center of unrest and power struggle today. 2 credits.
- 437-537 Two World Wars, 1912-1953.** Major events and trends comprising global history from 1912 to present. 4 credits.
- 438-538 History of the West.** How frontier environment, continuously present from colonial beginnings to 1890, basically affected development of American history. 3 credits.
- 442-542 Recent American History, 1912 to Date.** Emergence of United States as a world power, with emphasis on interplay of domestic and foreign policies. 4 credits.
- 448-548 Social Forces in American History.** Historical development of American thought — exact, speculative, and popular — and its interrelationship with social environment. 3 credits.
- 450-550 The Liberal Movement.** Rise of liberal political thought and practice, its capitulation before conservative, fascist, and communist forces, with a consideration of prospect for liberalism in contemporary world. Prerequisite: History 245. 3 credits.
- 455-555 Foreign Relations of United States, 1775-1898.** American foreign policy, fundamental principles, neutral rights, Monroe Doctrine, influence of sectional policies on foreign affairs. War Between the States and its effects on American diplomacy. 4 credits.
- 456-556 Foreign Relations of United States, 1898 to Present.** United States as a Great Power and its diplomatic policies in connection with two great wars and their aftermath. 4 credits.
- 457-557 Soviet Union.** From March 1917 to present. Revolution in theory and practice. Five-year plans; structure of the Soviet state; Communist Party and its socialist culture. Soviet state in relation to Western Europe and Asia. 4 credits undergraduate, 3 credits graduate.

COURSES FOR GRADUATE STUDENTS

- 551 Readings in American History.** Guided study of American History through individual investigation of special periods and topics. 2 credits.
- 552 Historiography.** Significant historians and historical theory; problems in presentation of historical interpretation. 2 credits.
- 553 Readings in European History.** Guided study of European history through individual investigation of special periods and topics. 2 credits.

MATHEMATICS

Rowland C. Anderson, Ed.D., Chairman

Mathematics, the logical study of shape, arrangement, and quantity, is presented by the Mathematics Department with these objectives in mind: (1) to give the student an appreciation of the natural origin and growth of mathematical ideas; (2) to train the student in the use of critical logical thinking and in the use of correct reasoning dependent upon definitions and assumptions; (3) to give the student a reasonable degree of facility in the application of mathematics to his personal life; (4) to provide the mathematical training for teaching or other professions.

High School Plane and Solid Geometry are required for pre-engineers and majors and minors in mathematics and physics. Students who did not take these

courses in high school may satisfy the requirements by correspondence courses or by tutorial classes and examination arranged by the Mathematics department.

Math 019 Plane Geometry. No credit.

Math 020 Solid Geometry. No credit.

These requirements should be completed before the end of the Freshman year. Credit may be earned in Math 121, 221, and 224 by comprehensive examination.

BACHELOR OF SCIENCE

Major (48)

- 241 Analysis I (4)
- 242 Analysis II (4)
- 243 Analysis III (4)
- 244 Analysis IV (4)
- 355 Foundations of Mathematics (4)
- 356 Modern Algebra (4)
- 425 College Geometry (4)
- 429 Probability and Statistics (4)
- 451 Professional Subject Matter (4)
- Electives (Senior College Mathematics) (12)

Minor (36)

- 241 Analysis I (4)
- 242 Analysis II (4)
- 243 Analysis III (4)
- 355 Foundations of Mathematics (4)
- 356 Modern Algebra (4)
- 425 College Geometry (4)
- 429 Probability and Statistics (4)
- 451 Professional Subject Matter (4)
- Electives (Senior College Mathematics) (4)

BACHELOR OF ARTS

An outline of the requirements for a major or minor in Mathematics can be obtained from the Chairman of the Mathematics Department.

COURSE DESCRIPTIONS

- 121 Cultural Mathematics.** Computational and informational mathematics. Number systems, number bases, construction and interpretation of graphs, use of formulas, functional relations, measurement, statistics, consumer mathematics, fundamental concepts and rules of arithmetic and algebra, sets, logic, recreational mathematics. 4 credits.
- 220 Intermediate Algebra.** Fundamental operations of algebra, linear and quadratic functions; graphical representation of numbers; solution of elementary linear and quadratic equations; problem solving. 4 credits.
- 221 College Algebra.** Complex numbers; simultaneous quadratic equations, permutations and combinations; probability; determinants; partial fractions; inequalities; theory of equations; progressions; mathematical induction. Prerequisite: Mathematics 220 or Higher Algebra in high school. 4 credits.
- 224 Trigonometry.** Trigonometric functions; solution of right triangle; logarithms; radian measure; properties of trigonometric functions; the fundamental relations; functions of two angles; the oblique triangle; inverse trigonometric functions; complex numbers. Prerequisite: Mathematics 221 and high school Plane Geometry or Mathematics 019. 4 credits.
- 228 Slide Rule.** Theory and use. 1 credit.
- 241 Analysis I.** Straight line, parabola, differentiation of algebraic functions, applications of derivatives, indefinite integrals. Prerequisite: Advanced Algebra and Trigonometry in high school and in upper 50 per cent on Mathematics Entrance Test, or Mathematics 221 and 224.
- 242 Analysis II.** Functions and limits, differentiation and integration of algebraic functions, applications, definite integrals. Prerequisite: Mathematics 241. 4 credits.
- 243 Analysis III.** Differentiation and integration of transcendental functions, applications, formal integration, indefinite integrals. Prerequisite: Mathematics 242. 4 credits.
- 244 Analysis IV.** Applications of the calculus, differentials, moments and centers of gravity, improper integrals and indeterminate forms, infinite series. Prerequisite: Mathematics 243. 4 credits.
- 250 Foundations of Arithmetic.** Real number system and its subsystems. Selected topics from elementary number theory. Basic geometric concepts. 4 credits.

- 330 Elements of Statistics.** Computation, charts, diagrams, and graphs. Frequency distributions, measures of central tendency, measures of dispersion, probability and the normal curve. Moments, various frequency curves, and the Chi-Square Test. Measures of reliability. Secular trend and cyclical movements. Index numbers and correlation. Not counted toward Mathematics major or minor. 4 credits.
- 351 Teaching of Arithmetic in Elementary School.** Problems involved in kindergarten through grade eight. Reading and writing of numbers; the four fundamental operations with integers, denominate numbers, common and decimal fractions; measurement and intuitive geometry; business arithmetic; the formula, equations, graphs and signed numbers. All topics discussed in their relationship to the Minnesota Elementary School Curriculum. Observation of teaching in which above topics are exemplified. 4 credits.
- 355 Foundations of Mathematics.** Geometric and algebraic systems; modern mathematical and real number systems; sets; Boolean algebra; logic; philosophy. 4 credits.
- 356 Modern Algebra.** Congruences, polynomials, number systems, Boolean algebra, groups, matrix theory, fields, rings, and ideals. 4 credits.
- 451 Professional Subject Matter for Junior and Senior High School Mathematics.** Subject matter and teaching course. Current curriculum developments, topics in modern mathematics, lesson planning, teaching, and observation in junior and senior high school mathematics. To be taken before student teaching. 4 credits.
- 454 Field Work in Mathematics.** Applications of mathematics through use of transit, level, plane table, sextant, angle mirror, clinometer, hysometer, alidade, and slide rule in actual field experience. Valuable supplemental work for numerical trigonometry and indirect measurement in geometry. Prerequisite: Trigonometry. 3 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems.** A seminar or conference course for advanced students wishing to work out a special problem in mathematics. 1-4 credits.
- 423-523 Theory of Equations.** Algebraic theory. Complex numbers; elementary theorems on roots of equations; constructions with ruler and compass; cubic equations; quartic equations; isolation of real roots; solution of numerical equations. Prerequisite: Mathematics 331 or 242. 4 credits.
- 425-525 College Geometry.** An extension of plane geometry. Emphasis on analysis in problem solving. Prerequisite: High School Plane Geometry or Mathematics 019. 4 credits.
- 426-526 Advanced Geometry.** Topics from: Modern Euclidean geometry, non-Euclidean geometries, finite geometry, projective geometry, topology. Prerequisite: Mathematics 425. 4 credits.
- 429-529 Probability and Statistics.** Elementary probability, permutations and combinations. Normal distribution. Sampling methods. Regression and correlation, linear and curvilinear. Chi-square distribution. Index numbers. Time series. Variance. Prerequisite: Mathematics 242 or equivalent. 4 credits.
- 430-530 Advanced Statistics.** Recent developments in application of statistics in the social sciences, business administration, governmental affairs, research, and general culture. Curve fitting, linear correlation, multiple correlation, tests of hypothesis, analysis of time series, analysis of variance, sampling and sample surveys, statistical quality control. Prerequisite: Mathematics 330 or 429. 4 credits.
- 432-532 Calculus III.** Partial derivatives; multiple integrals; infinite series; expression of functions; differential equations. Prerequisite: Mathematics 332 or 244. 4 credits.
- 433-533 Advanced Calculus.** More advanced aspects of partial differentiation, multiple, line and surface integrals with applications; Gamma, Beta, Bessel and elliptic functions; Fourier series. Prerequisite: Mathematics 432. 4 credits.

- 434-534 Differential Equations.** Separable, homogeneous, and exact equations; linear equations; solutions by use of series; applications to physical problems. Prerequisite: Mathematics 332 or 244. 4 credits.
- 435-535 Higher Mathematics for Scientists.** Vector addition and multiplication, differential operations in curvilinear coordinates, Stokes' theorem, Gauss's theorem, complete variables, harmonic analysis, and boundary value problems. Prerequisite: Mathematics 332 or 244. 4 credits.
- 440-540 History of Mathematics.** Historical survey of mathematical development and contributions from beginning to present time. Prerequisite: Mathematics 226 or 241. 4 credits.
- 452-552 Recent Trends in Secondary School Mathematics.** For secondary school mathematics teachers. Number systems, sets, deductions, algebras, geometries, vectors, limits, functions, probability, computers, decisions. The changing mathematics curriculum. **Restriction:** Not to be taken for credit by NSF Institute students. Prerequisite: Mathematics major or minor completed before June 1962. 4 credits.
- 457-557 Linear Algebra.** Vectors and vector spaces. Euclidean n -space, linear transformations, matrices, bilinear and quadratic forms, complex number field, polynomial rings. Prerequisite: Mathematics 242 and 356. 4 credits.
- 459-559 Recent Trends in Elementary School Mathematics.** For teachers who have not taken a course in teaching of arithmetic since 1959. Emphasizes the modern approach to teaching arithmetic; teaching aids and devices; experimental work; recent research. 4 credits.

COURSES FOR GRADUATE STUDENTS

- 521 Modern Algebra.** Congruences, polynomials, number systems, Boolean algebra, groups, matrix theory, fields, rings, and ideals. 4 credits.
- 542 Functional Mathematics for Secondary Teachers.** Professionalized subject matter intended to broaden and deepen the teacher's knowledge of mathematics. 4 credits.
- 555 Foundations of Mathematics.** Geometric and algebraic systems; modern mathematical and real number systems; sets; Boolean algebra; logic; philosophy. 4 credits.
- 560 Problems in Teaching of Mathematics.** Those encountered by both elementary and secondary school teachers. Limited to students with teaching experience. 4 credits.
- 559 Master's Projects.** 1-3 credits.

MUSIC

Harvey R. Waugh, M.A., Chairman

The functions of the Music Department are: to prepare students to teach music at all levels in the schools; to foster the development of musical talent; to provide rich musical experiences for all students; to contribute to the musical life of the college, community, and state.

BACHELOR OF SCIENCE

Major (84)

- 100, 101 Theory (4)
 200, 201, 202 Theory (13)
 165 Piano (6)
 210 Instrumental (Foundations) (3)
 211 Vocal (Foundations) (3)
 240 Conducting (Basic) (3)
 321, 322, 323 History (9)
 406 Acoustics (3)
 Organizations—Instrumental and Vocal (6)

Electives (34). Elect one emphasis from the following:

Instrumental Emphasis (34)

- 340 Conducting (3)
 372 Woodwind (3)
 373 Brass (3)
 374 Percussion (2)
 375 String (3)
 403 Arranging (3)
 405 Administration (3)
 444 Marching Band (2)

- Applied Music—Instrumental and Voice (9)
Electives (3)
Vocal Emphasis (34)
300 Music Education—Elem. (3)
301 Music Resources—Elem. (4)
302 Music Education—Jr. High (5)
401 Elementary Music Administration (3)
402 Secondary Music Administration (2)
Applied Music (Voice and Instrumental) (8)
213 Solo Performance and Literature (2)
341 Choral Conducting and Literature (5)
404 Choral Arranging (2)
- Elementary Education Minors (24 or 36)**
100, 101, 200 Theory (9)
165 Piano (6)
240 Conducting (3)
322, 323 History of Music (6)
The 36 hour minor requires an additional 12 hours of electives to be approved by adviser.
Elementary education majors electing music as a minor will substitute Music 300 for Music 250 and Music 301 for Music 251.
- Instrumental Minor (36)**
100, 101, 200 Theory (9)
165 Piano (3)
210 Instrumental (3)
240 Conducting (Basic) (3)
372, 373, 374 or 375 (2-3)
340 Conducting, Instrumental (3)
403 Arranging, Instrumental (3)
Organizations (4-5)
Applied Music—Instrumental (5)
- Vocal Minor—Secondary (36)**
100, 101, 200 Theory (9)
165 Piano (4)
169 Voice (3)
240 Conducting (Basic) (3)
302 Music Education—Jr. High (5)
341 Choral Conducting and Literature (5)
402 Secondary Music Administration (2)
Organizations (3)
Electives (2)
- Vocal Minor—Elementary (24)**
This minor is not to be used to satisfy the minor requirement for an elementary education program.
100, 101 Theory (4)
300 Music Education—Elementary (3)
301 Music Resources—Elementary (4)
165 Piano (4)
169 Voice (3)
240 Conducting (Basic) (3)
Organizations (3)

COURSE DESCRIPTIONS

- 100 Theory I.** Notation, rhythm, scales, intervals, and chords with appropriate ear-training. Prerequisite: Ability to sing and to play the piano or an orchestral instrument. 2 credits.
- 101 Theory II.** Melody writing, addition of a second voice, and use of primary chords in free style with appropriate ear-training and keyboard work. Prerequisite: Theory I. 2 credits.
- 111 Concert Choir.** 1 credit.
- 123 Humanities.** Significant aspects of man's creative works in music. 4 credits.
- 131 Cecilians.** 1 credit.
- 141 College Bands.** 1 credit.
- 161 College Orchestra.** 1 credit.
- 165 Private Lessons on Piano.** 1 credit.
- 166 Private Lessons on Organ.** 1 credit.
- 169 Private Lessons in Voice.** 1 credit.
- 171 Private Lessons on String Instruments.** 1 credit.
- 172 Private Lessons on Brass Instruments.** 1 credit.
- 173 Private Lessons on Woodwind Instruments.** 1 credit.
- 174 Private Lessons on Percussion Instruments.** 1 credit.
- 200 Theory III.** Strict four-part harmonization, voice leading and expansion of basic progressions through inversions, secondary chords, and simple modulation with appropriate ear-training and keyboard work. Prerequisite: Theory II. 5 credits.
- 201 Theory IV.** Modulation, non-harmonics, chromatic and modal harmony with appropriate ear-training and keyboard work. Prerequisite: Theory III. 5 credits.

- 202 Theory V.** Modern harmony and contrapuntal practice for use in beginning composition. Prerequisite: Theory IV. 3 credits.
- 210 Foundations of Music Education—Instrumental.** Principles and procedures involved in the instrumental music program. 3 credits.
- 211 Foundations of Music Education—Vocal.** Principles and procedures involved in the total vocal music education program. 3 credits.
- 213 Solo Performance and Literature.** Group discussion, solo performance, study of vocal problems. To be taken concurrently with Music 169. 2 credits.
- 230 Italian Opera.** For non-initiated listener who wants to learn a stimulating approach to understanding of better-known Italian operatic works. Open to all students. 3 credits.
- 240 Conducting.** Basic conducting principles in choral and instrumental music. Rehearsal techniques and examination of vocal and instrumental literature. Prerequisite: Music 101. 3 credits.
- 250 Teaching in Elementary School.** Music possibilities in the classroom. Song materials, classroom instruments, records. Development of fundamental skills. 3 credits.
- 251 Teaching Music in the Elementary School.** Materials adapted to normal social and musical interests and needs of children. Use in classroom activities. Prerequisite: 250. 3 credits.
- 252 Teaching Music in Elementary School.** More advanced skills as outgrowth of activities. Individual needs. Relationships of music consultant and elementary classroom teacher. Prerequisite: 250 and 251. 3 credits.
- 300 Music Education—Elementary Grades.** Procedures used in kindergarten through sixth grade for developing children's musical growth in the various areas of the music program—singing, listening to music, playing classroom instruments, rhythmic-dramatic expression, and interpreting the musical score. 3 credits.
- 301 Music Resources—Elementary Grades.** Films, records, song literature, and community resources which are used in kindergarten through sixth grade. 4 credits.
- 302 Music Education—Junior High School.** Activities and resources appropriate for the general music class and the specialized aspects of the vocal music program in grades seven through nine. 5 credits.
- 321 History of Music I.** Historical changes in music from the earliest times through the sixteenth century. Sacred and secular developments will be analyzed culminating with the works of Palestrina. 3 credits.
- 322 History of Music II.** The period from Palestrina to 1800 with emphasis on the development of opera and instrumental music; ending with a study of the works of Beethoven. 3 credits.
- 323 History of Music III.** The period from Beethoven through our contemporary composers. Major literature and stylistic features of the important writers in the 19th and 20th century. 3 credits.
- 340 Instrumental Conducting and Repertoire.** Qualities of a conductor, use of baton, rehearsal routine, problems of organizing and developing orchestras and bands in schools; orchestral and band literature. Prerequisite: Music 240. 3 credits.
- 341 Choral Conducting and Literature.** Development of conducting skills especially for high school vocal groups. Study of choral techniques. Examination of diversified choral literature. Prerequisite: Music 240. 5 credits.
- 372 Woodwind Class.** Fundamental techniques and skills. Selection, care, and assembly of the instrument; teaching techniques; and instructional materials. Prerequisite: Music 210. 3 credits.
- 373 Brass Class.** (Same description as 372.) Prerequisite: Music 210. 3 credits.
- 374 Percussion Class.** (Same description as 372.) Prerequisite: Music 210. 2 credits.
- 375 String Class.** (Same description as 372.) Prerequisite: Music 210. 3 credits.
- 401 Elementary Music Administration.** Staff relations, co-teaching, conferences, workshops, demonstration and observation lessons, purchase and maintenance of materials and equipment, and the use of music to enrich the total elementary school program. 3 credits.
- 402 Secondary Music Administration.** Organizational details, rehearsal techniques,

program building, administrative duties, evaluation, purchase and preparation of materials and equipment. 2 credits.

403 Instrumental Arranging. Band and orchestra instruments: register and tone quality. Experience in writing arrangements for all types of groups from the small ensemble to the large instrumental organizations. Prerequisite: Music 200. 3 credits.

404 Choral Arranging. Arranging for choruses of all types and degrees of development. Prerequisite: Music 200. 2 credits.

405 Instrumental Administration. Problems inherent in the administration of the public school instrumental music program. Prerequisite: 210. 3 credits.

406 Acoustics of Music. Nature of sound of and its application to the field of music. The course emphasizes the characteristics of sound waves, the vibratory sources of sounds used in music, and the physical basis of harmony and scales. Prerequisite: Music 202. 3 credits.

444 Techniques of Marching Band. Organization of marching bands, formation planning, scoring and study of suitable repertoire. 2 credits.

Private Lessons in Voice, Piano, Band and Orchestral Instruments. The fee for lessons in voice, piano, band or an orchestral instrument is \$15 per quarter. Majors and minors in music are not required to pay the fee for required credit. The fee for lessons in organ is \$20 per quarter.

Students not majoring in music may register for either private lessons as electives.

One half hour to one hour of practice per day is required of all voice students and one to two hours of practice per day is required of all piano and instrumental students.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

400-500 Special Problems. A seminar or conference course for advanced students wishing to work out a special problem in Music. 1-4 credits.

COURSES FOR GRADUATE STUDENTS

520 Analytical Technique. Harmonic, melodic, and structural analysis of music in various periods with emphasis on aspects specifically needed by students. 4 credits.

542 Choral Literature. Choral literature from Palestrina to present day with special attention to greater works in Oratorio, Operatic, Choral, Symphonic, and Mass form. 2 credits.

523 Music in Western Civilization. Primarily for students who want a general studies elective in music. Examination of music masterpieces, continuation and elaboration of Music 123. Not open to students with majors or minors in music. Prerequisite: Music 123 or equivalent. 3 credits.

531 Choral Arranging. Principles and devices in choral arranging for choruses of all types and degrees of development. 4 credits.

550 Music for the Classroom Teacher. Advanced methods in teaching Public School Music through first six grades. Unit study, aids in music integration, special projects, current materials, comparison of teaching methods. 4 credits.

553 Music Education Seminar. Research and discussion of latest developments. Individual problems analyzed and discussed. 2 credits.

554 Stringed Instrument Seminar. Special projects, special techniques of bowing, position work, and artistic skills. Survey of solo materials. 2 credits.

555 Band Administration. Administrative principles applied to school bands, with special emphasis on organization, promotion, and public relations. 2 credits.

556 Band Rehearsal Techniques. Practice in aural discrimination of performance errors and application of corrective procedures. Special emphasis given to intonation, balance, blend, quality, interpretation, and ensemble. 2 credits.

- 560 Music Consultant in Elementary School.** Staff relations, co-teaching, conferences, workshops, demonstration and observation, using music to enrich total elementary program. 2 credits.
- 561 Teaching and Supervising Music in Junior and Senior High Schools.** Place of music in education of adolescents. Materials and activities appropriate for music program in secondary school. Prerequisite: Music 300, 301, 302. 3 credits.

PHILOSOPHY

John N. Phillips, Ph.D., Acting Chairman

Philosophy offers the student acquaintance with the systematic development of beliefs, critical awareness of his own assumptions and choices, and techniques for making beliefs clearer and more precise. These things have value in themselves, can enhance the study of any other field, and may help to guide intelligent action.

BACHELOR OF ARTS

Minor (24)

- | | |
|------------------------------------|--|
| 220 Introduction to Logic (4) | 330 Survey of Classical Greek Philosophy |
| 222 Principles of Ethics (4) | or |
| 444 Recent European Philosophy (4) | 443 History of Modern Philosophy (4) |
| | Electives in Philosophy (8) |

COURSE DESCRIPTIONS

- 110 Introduction to Philosophy.** Introductory course including theory of knowledge, value theory, and metaphysics. 4 credits.
- 220 Introduction to Logic.** Traditional and contemporary investigation of accurate reasoning, deductive and inductive. 4 credits.
- 222 Principles of Ethics.** Comparative analysis of theories of right conduct and of the good; hedonism, utilitarianism, naturalism, formalism, and perfectionism; applications of moral theory to practice and a study of specific ethical values, metaphysics and ethics. 4 credits.
- 330 Survey of Classical Greek Philosophy.** Consideration of the great questions of man's intellectual inquiry, and the answers propounded by Greek thinkers. Special references to Socratic Dialogues, Plato's **Republic**, and Aristotle's **Ethics**. 4 credits.
- 331 Philosophy of Art.** Major aesthetic theories, with particular applications to the principles of criticism in literature, music, theatre, and the visual arts. 4 credits.
- 332 Philosophy of Science.** Analysis of the fundamental concepts used in the physical and social sciences, such as law, theory, confirmation, explanation, and probability. 4 credits.
- 441-541 Living Religions of the World.** Comparison of some basic ethical, philosophical, and theological concepts adhered to by 20th century religious orthodoxies; some examination of the place of religious dogma in the present time. 4 credits undergraduate, 3 credits graduate.
- 442-542 History of American Philosophical Thought.** Tracing of the course of development of American philosophy from its beginnings, Puritanism, Transcendentalism, Idealism, Pragmatism, and other concepts, leading to consideration of major contemporary concepts. 4 credits undergraduate, 3 credits graduate.
- 443-543 History of Modern Philosophy.** A critical appraisal of the work of such modern philosophers as Descartes, Hume, Kant. 4 credits undergraduate, 3 credits graduate.
- 444-544 Recent European Philosophy.** Influential thinkers of the 19th and 20th centuries, such as Hegel, Kierkegaard, Marx, Nietzsche, Bergson, Husserl, Heidegger, Sartre. 4 credits undergraduate, 3 credits graduate.

PHYSICS

Philip G. Youngner, Ph.D., Chairman

BACHELOR OF SCIENCE

Comprehensive Physics Major (84)

Bot 245 General Botany (4)
 Chem 211, 212 General Chemistry (8)
 Math 221 College Algebra (4)
 Math 224 Trigonometry (4)
 Math 241 Analysis I (4)
 Math 242 Analysis II (4)
 Math 243 Analysis III (4)
 Electives (Physics) (7)
 Phys 234, 235, 236 General Physics (15)
 Phys 237 Intermediate Mechanics,
 Electricity, and Magnetism (5)
 Phys 328 Atomic Physics (5)
 Phys 329 Nuclear Physics (4)
 Phys 332 Electronics (4)
 Phys 333 Optics (4)
 Sci 453 Teaching Secondary Science (4)
 Zool 241 General Zoology (4)

Physics Major (48)

Phys 234-5-6 General Physics (15)
 Phys 238 Atomic Physics (5)
 Phys 329 Nuclear Physics (4)
 Phys 332 Electronics (4)
 Phys 333 Optics (4)
 Sci 453 Teaching Secondary Science (4)
 Electives (Physics) (12)

Physics Minor (36)

Phys 234, 235, 236 General Physics (15)
 Phys 328 Atomic Physics (5)
 Phys 329 Nuclear Physics (4)
 Phys 332 Electronics (4)
 Electives (Physics) (8)

Physics Minor (24)

Phys 234, 235, 236 General Physics (15)
 Phys 328 Atomic Physics (5)
 Electives (Physics, Senior College) (4)

Students interested in physical or general science programs should refer to Sciences' interdepartment course offerings.

BACHELOR OF ARTS

An outline of the requirements for a major or minor in Physics can be obtained from the Chairman of the Department.

COURSE DESCRIPTIONS

- 103 Concepts in Physics.** Energy: source and forms; important discoveries in mechanics, electricity, radiant and nuclear energy, and their effects on living and achievement; intelligent use of discoveries in physics; natural forces controlling the universe. Laboratory. 4 credits.
- 201 Mechanics and Heat.** Basic principles of mechanics of solids, liquids, and gases; equilibrium; laws of motion; work and energy. Thermometry; simple heat engines; kinetic theory of gases. Laboratory. Prerequisite: High school Algebra or Mathematics 220. 4 credits.
- 202 Electricity, Magnetism, and Light.** Electrostatics, magnetostatics, magnetic effect of electric currents; electrical circuits. Propagation of light; image formation; spectra. Diffraction, interference, and polarization. Laboratory. Prerequisite: Physics 201. 4 credits.
- 205 Elementary Electronics and Practical Radio.** Electron emission, tube characteristics, rectifiers, amplifiers, oscillators, radio servicing. Laboratory. Prerequisite: Physics 202 or equivalent. 4 credits.
- 231 Mechanics.** Vectors, statics, moments, rectilinear motion, Newton's laws of motion, work and energy, impulse and momentum, rotational and harmonic motion; elasticity, hydrostatics, hydrodynamics. Laboratory. Prerequisite: Trigonometry or enrollment in trigonometry. 4 credits.
- 232 Electricity and Magnetism.** Coulomb's law, electric field, electrical potential, dielectrics, current electricity, DC circuits, ionic conduction, magnetic field, magnetic effects of current, electrical instruments, capacitance and inductance, AC currents, electromagnetic waves, elementary electronics. Laboratory. Prerequisite: Physics 231 or 234 or equivalent. 4 credits.
- 233 Heat, Light, and Sound.** Temperature, heat, heat transfer, laws of thermodynamics, thermal properties of matter. Wave motion, vibrating bodies, acoustical effects. Nature and propagation of light, reflection and refraction, lenses,

optical instruments, photometry, interference and diffraction, polarization. Laboratory. Prerequisite: Physics 231 or 234 or equivalent. 4 credits.

- 234 Mechanics.** Vectors, statics, moments, rectilinear motion, Newton's laws of motion, work and energy, impulse and momentum, rotational and harmonic motion, elasticity, hydrostatics, hydrodynamics. Laboratory. Prerequisite: Trigonometry or enrollment in trigonometry. 5 credits.
- 235 Electricity and Magnetism.** Coulomb's law, electric field, electrical potential, dielectrics, current electricity, DC circuits, ionic conduction, magnetic field, magnetic effects of current, electrical instruments, capacitance and inductance, AC currents, electromagnetic waves, elementary electronics. Laboratory. Prerequisite: Physics 231 or 234 or equivalent. 5 credits.
- 236 Heat, Light, and Sound.** Temperature, heat, heat transfer, laws of thermodynamics, thermal properties of matter. Wave motion, vibrating bodies, acoustical effects. Nature and propagation of light, reflection and refraction, lenses, optical instruments, photometry, interference and diffraction, polarization. Laboratory. Prerequisite: Physics 231 or 234 or equivalent. 5 credits.
- 237 Intermediate Mechanics and Electromagnetism.** Laws of motion, periodic motion, motion of rigid bodies, hydrodynamics, Gauss's Law, magnetic fields, direct and alternating currents, electrical transients, other selected topics. Approach is from calculus point of view. Laboratory. Prerequisite: Physics 235 and Mathematics 243. 5 credits.
- 328 Introduction to Atomic and Molecular Physics.** Atomic theory, electron, isotopes, radiation, photoelectric effect, Bohr theory, atomic spectra, the periodic table, X-rays, deBroglie waves, special theory of relativity. Laboratory. Prerequisite: 1 year college physics and Mathematics 243. 5 credits.
- 329 Introduction to Nuclear Physics.** Radioactivity, the nucleus, nuclear reactions, cosmic rays. Prerequisite: Physics 328. 4 credits.
- 332 Electronics.** Electronic emission, construction and characteristics of vacuum and gas tubes, rectifiers, amplifiers, oscillators, resonant circuits, coupling, radio transmission and reception, transistors, electronic devices. Laboratory. Prerequisite: 1 year of college physics. 4 credits.
- 333 Optics.** Geometric and physical optics, refraction, diffraction, interference, polarization, optical instruments, spectra. Laboratory. Prerequisite: 1 year of college physics. 4 credits.
- 334 Thermodynamics.** Measurement of temperature and thermal energy, heat transfer, radiation, change of phase, equations of state, real gases, laws of thermodynamics, thermodynamic cycles, entropy, kinetic theory, Maxwell-Boltzmann statistics. Laboratory. Prerequisite: 1 year of college physics and Mathematics 243. 5 credits.
- 335 Electrical Measurements.** A laboratory course. The theory of electrical and magnetic measuring instruments and their associated circuits. Precision measurements of electrical and magnetic phenomena. Prerequisite: 1 year college physics and integral calculus. 2 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems.** A seminar or conference course for advanced students wishing to work out a special problem in Physics. 1-4 credits.
- 431-531 Modern Physics.** Maxwell's equations; electromagnetic waves; radiation from accelerated charge; thermal radiation, Planck's radiation law; Boltzmann's distribution; Relativity. Prerequisite: Physics 329 and Mathematics 434 or equivalent. 3 credits.
- 432-532 Modern Physics.** The Schroedinger wave equation and solutions for some simple cases: eigenfunctions; the hydrogen atom; atomic spectra; molecular spectra. Prerequisite: Physics 329 and Mathematics 434 or equivalent. 4 credits.
- 433-533 Modern Physics.** Energy bands in solids; theories of the electrical and magnetic properties of solids; semiconductors; the nucleus; nuclear reactions; cosmic rays. Prerequisite: Physics 329 and Mathematics 434 or equivalent. 3 credits.

436-536 Theoretical Physics—Mechanics. Conservative forces, central forces, mechanics of constrained particles, harmonic vibrations, resonance, Lagrange's equations, Hamilton's equations, mechanics of rigid bodies. Prerequisite: 1 year college physics and Mathematics 434. 4 credits.

437-537 Theoretical Physics. Electrostatics; Gauss's law; Poisson's equation; Laplace's equation; dielectric theory; electric current; Biot Savart law; Maxwell's equations; Poynting vector; electromagnetic waves. Prerequisite: 1 year college physics and Mathematics 434. 4 credits.

POLITICAL SCIENCE

Ronald G. Riggs, Ed.D., Chairman

BACHELOR OF ARTS

Students interested in social science programs should refer to the interdepartment offerings of Social Sciences and Social Studies.

Major (36)

- 281 American National Government (4)
- 380 Public Administration (3)
- 382 State Government (3)
- 384 Comparative World Governments (3)
- 482 International Organization (3)
- 484 Constitutional Law (3)
- 487 The Legislative Process (3)
- Total required courses: (22)
- 14 credits of electives from:
 - 387 Municipal Government (3)
 - 485 Social Legislation (3)
 - 486 Political Parties (3)
 - 489 American Political Thought (3)
 - 474 African Governments (3)

476 Latin American

- Governments (3)
- Economics 371 Public Finance (4)
- History 455 Foreign Relations of the U. S., 1775-1898 (4)
- History 456 Foreign Relations of the U.S., 1898-present (4)
- Geography 486 Political Geography (4)
- Social Science 472 Methods in Social Research (2)

Minor (24)

The required courses as listed under the major in Political Science. 2 credits of electives as listed under the major.

COURSE DESCRIPTIONS

- 281 American Government.** Functions of the three branches of national government of United States. Emphasis on participation of the people in democratic processes of government. Prerequisite to all courses in Political Science. 4 credits.
- 380 Principles of Public Administration.** Administrative functions of our federal and state governments, emphasizing Civil Service procedure on national, state, and local levels, and problems of public finance through budgetary application and reforms. Prerequisite: 281. 3 credits.
- 382 State Government.** Organization and functioning of state government. Relations of state with national and local governments. Special attention to government of State of Minnesota. Prerequisite: 281. 3 credits.
- 384 World Government.** Governments of foreign countries; comparison of selected types: United Kingdom, France, Soviet Union, and others. Special attention to recent changes. Prerequisite: 281. 3 credits.
- 387 Municipal Government.** Functions of city and village government. Relations between state and local governments. Comparison of city-manager, mayor-council, and commission systems. Emphasis on Minnesota communities. Prerequisite: 281. 3 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems in Political Science.** A seminar or conference course for advanced students wishing to work out a special problem in political science. 1-4 credits.

- 474-574 Latin American Governments.** Analysis of governmental organization in Latin America. Emphasis on current developments. Major attention given larger countries such as Argentina; Brazil; Chile; Cuba; Mexico. Prerequisite: 281. 3 credits.
- 476-576 African Governments.** Study of current structure of governments in African nations. Emphasis on problems caused by transition from colonialism to independence. Prerequisite: 281. 3 credits.
- 482-582 International Organization.** History and development of the community of nations, organization and authority of League of Nations, United Nations and its auxiliary components. Prerequisite: 281. 3 credits.
- 484-584 Constitutional Law.** Supreme Court decisions relating to civil and political rights, due process, powers of legislative, executive, and judicial departments, commerce, taxation, and other areas of judicial review. Prerequisite: 281. 3 credits.
- 485-585 Social Legislation.** Federal, state, and local laws and regulations covering protective and control measures in social problems of health, safety, social insurance, child labor, advertising, pure food and drugs, old age benefits, and others. Prerequisite: 281. 3 credits.
- 486-586 Political Parties.** American party system, its structure, practices, and policies as found in caucus, convention, campaign, and election procedures. Prerequisite: 281. 3 credits.
- 487-587 Legislative Process.** Problems connected with a democratic legislature. Typical examples: the influence of committees; political party influence; pressure groups. Prerequisite: 281. 3 credits.
- 489-589 American Political Thought.** Philosophy which underlies our American system of democratic government. Political theories which have contributed to formation of our system of government. Prerequisite: 281. 3 credits.

COURSES FOR GRADUATE STUDENTS

- 501 Western Political Heritage.** Development of political thought with emphasis on background of modern democratic principles. 3 credits.

SOCIOLOGY

H. P. Lohrman, Ph.D., Chairman

Students interested in Social Science or Social Studies programs should refer to the interdepartment course offerings.

BACHELOR OF ARTS

Major (48)

- 260 Principles of Sociology (4)
 261 Social Deviations (3), or
 366 Juvenile Delinquency (3), or
 367 Criminology (3)
 461 Development of Social Thought (4)
 465 Social Psychology (4)
 467 Cultural Anthropology (4)
 369 Marriage and the Family (4)
 468 Ethnic Relations (3), or
 470 Social Control (4)
 477 Population Problems (3), or
 481 Social Stratification (3)
 222 Public Recreation (3), or
 365 Social Work (3), or
 464 School and Community (3)
 450 Seminar (2), or
 462 Seminar (2), or
 475 Field Work (2)
 Mathematics 330, Statistics (4), or

- Philosophy 221, Logic and Scientific
 Methods (4)
 Electives in Sociology (12-13)

Minor (36)

- 260 Principles of Sociology (4)
 261 Social Deviations (3), or
 366 Juvenile Delinquency (3), or
 367 Criminology (3)
 461 Development of Social Thought (4)
 465 Social Psychology (4)
 467 Cultural Anthropology (4)
 369 Marriage and the Family (4)
 Electives in Sociology (13)

Related Fields Minor (24)

(For Sociology majors only)

- Economics 272 Principles of
 Economics (5)
 Political Science 281 American
 Government (4)

Psychology 475 Abnormal
Psychology (4)
Speech 320 Public Speaking (4)
Electives in Social Science (7)

Elementary Education Minors (24 or 36)

260 Principles of Sociology (4)
261 Social Deviations, or
366 Juvenile Delinquency, or
367 Criminology (3)
465 Social Psychology (4)
467 Cultural Anthropology, or
359 The American Indian (4)

369 Marriage and the Family (4)
222 Public Recreation, or
365 Social Work, or
464 School and Community (3)
468 Ethnic Relations, or
461 Development of Social Thought, or
470 Social Control, or
371 Culture and Personality, or
477 Population Problems (2-4)

The 36 hour minor consists of the above courses and an additional 12 hours of electives in Sociology.

COURSE DESCRIPTIONS

- 222 Public Recreation.** History, theories, needs, values, organization and administration of public recreation. 3 credits.
- 260 Principles of Sociology.** Human relations, including culture, group, group and personality, group interaction; community, social institutions, cultural change, social disorganization. Prerequisite to all courses in sociology. 4 credits.
- 261 Social Deviations.** Conditions and trends in the United States; mental illness, alcoholism, drug addiction, delinquency and crime, others. Prerequisite: 260. 4 credits.
- 262 The Family.** History, functions, and changes in American family. Prerequisite: 260. 3 credits.
- 269 Rural-Urban Sociology.** Rural-urban trends and patterns in United States; social and cultural. Prerequisite: 260. 4 credits.
- 359 The American Indian.** The ethnology of selected tribes of American Indians. Emphasis upon prehistoric cultures of North, Central, and South America. Prerequisite: Sociology 260. 4 credits.
- 363 The Co-operative Movement.** Theory and practice. Development of the Rochdale principles of co-operatives in Europe and United States. Structure and problems of co-operative enterprise, with critical analysis. Prerequisite: 260. 2 credits.
- 365 Introduction to Social Work.** The fields of social work; techniques and procedures employed in the various fields with emphasis on casework. Prerequisite: Sociology 260; major or minor in sociology. 3 credits.
- 366 Juvenile Delinquency.** Causes, treatment, and prevention of juvenile delinquency. Prerequisite: 260. 3 credits.
- 367 Criminology.** Etiology, treatment, and prevention of criminal behavior in modern society. Prerequisite: 260. 4 credits.
- 369 Marriage and Family.** Courtship, marriage, husband-wife relationship, parent-child relationships, problems of family, factors associated with happiness and success, and family disorganization. Prerequisite: 260. 4 credits.
- 471 Culture and Personality.** Personality development in context of cultural patterns for behavior in both preliterate and modern societies. Prerequisite: 260. 2 credits.
- 475 Field Work.** Placement in a supervised research or training project which may be a social service agency, correctional institution, or other approved facility. (Admission by departmental approval. No more than 4 credits from one placement.) 1-8 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems in Sociology.** A seminar or conference course for advanced students wishing to work out a special problem in sociology. 1-4 credits.

- 450-550 Seminar. Integration of the Social Sciences.** How the various social sciences contribute to the study of society and social change. Prerequisite: 260. 2 to 4 credits.
- 461-561 Development of Social Thought.** Theory and methodology in social thought from ancient times to the present. Prerequisite: Sociology 260. 4 credits.
- 462-562 Seminar.** Discussion, readings, evaluation of sociological theory, social issues, or contemporary events. A specific topic selected each time offered. (May be repeated.) 1-4 credits.
- 464-564 School and Community.** Community structure, institutions, and life. Relationship between community and personality growth. School and community relationships; the community school; youth and community surveys; the coordinating council. Prerequisite: 260. 3 credits.
- 465-565 Social Psychology.** Influence of human relations and culture on development of personality. Biological, ethnological, and culture approaches to individual, sex, and racial differences. Development of attitudes and prejudices. Propaganda, rumor, and other psycho-social phenomena. Prerequisite: 260. 4 credits.
- 467-567 Cultural Anthropology.** Culture: its meaning, analysis, changes. Cultural differentiation. Significance of culture in human relations. Insights and concepts necessary for understanding and promoting intercultural relations. Primitive and modern advanced cultures. Prerequisite: 260. 4 credits.
- 468-568 Ethnic Relations.** Problems arising from ethnic differentiation, such as cultural background, religion, and race. Prerequisite: 260. 3 credits.
- 470-570 Social Control.** Social and cultural processes and techniques by which persons are taught, persuaded, or compelled to conform to norms and values of groups. Prerequisite: 260. 4 credits undergraduate, 3 credits graduate.
- 473-573 History of Social Work.** Background of the modern social work movement and development of its underlying theory. Prerequisites: 260, 365. 3 credits.
- 477-577 Population Problems.** Population trends and their social economic, and political significance; programs and theories of population control. Prerequisite: 260. 3 credits.
- 481-581 Social Stratification.** Nature, functions, criteria, and significance of social stratification systems; trends and factors in social mobility. Prerequisite: 260. 3 credits.

SPEECH AND DRAMATIC ART

Arthur L. Housman, Ph.D., Chairman

The Department of Speech and Theatre has a twofold objective in its course offerings and activities: (1) to provide opportunity for students able to profit from an extensive and demanding academic program in all areas of speech and dramatic art, (2) to provide opportunities for students with special interests or talents to develop those talents or further those interests by participating in debate, discussion, radio, theatre production, and speech clinical work, and learning the skills required for highly competent direction of those activities at various educational levels.

BACHELOR OF SCIENCE

Students interested in language arts program should refer to the interdepartment course offerings as listed in Language Arts.

Major—General Speech (48)

Core: (25)

- 235 Introduction to the Theatre (4)
293 Introduction to Speech Disorders (3)
320 Public Speaking (4)
325 Discussion and Conference

Leadership (3)

- 331 Oral Interpretation (3)
381 Speech Science (3)
449 Theory and Technique of Directing (3)
452 Teaching of Speech (2)

Plan A (13)

- 236 Technical Production Methods I (2)
- 237 Technical Production Methods II (2)
- 446 Theory and Practice of Scenic Design I (2)
- 448 Theory and Technique of Acting (4)
- 491 Drama: The Beginnings to Ibsen (4)

Electives (10)

- 321 Parliamentary Law (2)
- 371 Survey of Radio and Television Techniques (4)
- 420 Persuasion (3)
- 426 Argumentation (3)
- 428 Speech Criticism (3)
- 441 Technical Theatre Workshop (4)
- 442 Theory and Practice of Stage Lighting (2)
- 444 Acting and Directing Workshop (4)
- 445 Costuming and Makeup (2)
- 447 Theory and Practice of Scenic Design II (2)
- 492 The Modern Drama: Ibsen to World War II (4)
- 493 Contemporary Drama (4)

Plan B (11)

- 321 Parliamentary Law (2)

- 420 Persuasion (3)
- 426 Argumentation (3)
- 428 Speech Criticism (3)

Electives (12)

- 236 Technical Production Methods I (2)
- 237 Technical Production Methods II (2)
- 371 Survey of Radio and Television Techniques (4)
- 384 (Social Science) World Government (3)
- 441 Technical Theatre Workshop (4)
- 442 Theory and Practice of Stage Lighting (2)
- 444 Acting and Directing Workshop (4)
- 445 Costuming and Makeup (2)
- 446 Theory and Practice of Scenic Design I (2)
- 491 Drama: The Beginnings to Ibsen (4)
- 492 The Modern Drama: Ibsen to World War II (4)
- 493 Contemporary Drama (4)
- 345 (History) American Economic History (4)
- 442 (History) Recent American History (4)
- 448 (History) Social Forces in American History (3)

Minor (36)

- 235 Introduction to the Theatre (4)
- 236 Technical Production Methods I (2)
- 293 Introduction to Speech Disorders (3)
- 320 Public Speaking (4)
- 321 Parliamentary Law (2)
- 325 Discussion and Conference Leadership (3)
- OR—
- 426 Argumentation (3)
- 331 Oral Interpretation (3)
- 381 Speech Science (3)
- 449 Theory and Technique of Directing (3)
- 452 Teaching of Speech (2)

Elementary Education Minor (36)

This minor is the same as the 36 hour minor listed above, with the deletion of Spc 452, and the addition of 2 more elective credits.

SPEECH PATHOLOGY AND AUDIOLOGY**Major (48)**

- 285 Phonetics (3)
- 293 Introduction to Speech Disorders (3)
- 320 Public Speaking (4)
- 380 Anatomy and Physiology of the Ear and Vocal Mechanism (3)
- 381 Speech Science (3)
- 382 Speech Pathology (3)
- 384 Speech Reading (3)
- 453 Methods in Public School Speech Correction (2)
- 454 Diagnosis and Appraisal in Speech Pathology and Audiology (3)
- 480 Practicum in Speech Pathology and Audiology (6)
- 482 Speech Pathology II (3)
- 483 Hearing Conservation (4)
- Electives in related areas (8)

BACHELOR OF ARTS

Program requirements for a major or minor in Speech and Dramatic Art will be based on conference with the Chairman, Department of Speech and Theatre. Program will be designed to meet the individual interest, need, and demonstrated ability of the applicant.

COURSE DESCRIPTIONS

GENERAL EDUCATION COMMUNICATION COURSES

(Also see English Department for descriptions of English 062, 162, 172, 263, 273, and 274)

- 161 Speech.** Selection of subject, finding and testing supporting materials, organization. Physical and vocal delivery. Group problem-solving discussions. 4 credits.
- 171 Speech.** Open only to those who give evidence of a high degree of competence in oral communication. Selection of subject. Finding, testing, and using evidence. Organization. Physical and vocal delivery. Advanced training in persuasive and informative speaking, interpretation, and group discussions. 4 credits.

SPEECH

- 080 Special Instruction in the Speech and Hearing Clinic.** Training for students with speech and/or auditory problems. Prerequisite: Consultation with instructors. (Not to be counted toward graduation.) May be repeated. 1-3 credits.
- 227, 228, 229 Intercollegiate Discussion and Debate.** Current national debate and discussion topics. Participation in intersquad and intercollegiate discussion and debate tournaments. Three consecutive quarters necessary for credit. Evening class. 3 credits.
- 234 Recreational Dramatics.** Designed to meet elementary needs of directors of simple recreational entertainment. Given in conjunction with Speech 235, of which it is a part. 3 credits.
- 235 Introduction to the Theatre.** The theatre, its artistic and technical components, and requirements. For both the theatre specialist and directors of simple recreational entertainment. 4 credits.
- 236 Technical Production Methods I.** Scene design and construction; technical problems pertinent to educational theatre. Prerequisite: Speech 235. 2 credits.
- 237 Technical Production Methods II.** Continuation of Speech 236. Prerequisite: Speech 235, 236. 2 credits.
- 238-438 Theatre Production.** Active participation in theatre production activities. Departmental approval required. Maximum of 6 hours. 1-3 credits per quarter.
- 250 Voice and Diction.** Development of superior speech. Analysis of and practice in vocal pitch, loudness, and quality; speaking rate; articulation and pronunciation. 3 credits.
- 283 Elements of Speech Correction for the Classroom Teacher.** Elementary classroom speech disorders. Supervised laboratory practices in corrective measures for those defects not requiring therapy by a speech correctionist. 4 credits.
- 285 Phonetics.** Speech sounds from a sociological, physiological, and acoustical point of view. Instruction and training in the use of international phonetic alphabet. 3 credits.
- 293 Introduction to Speech Disorders.** Causes and symptoms of various speech disorders. Given in conjunction with Speech 283. 3 credits.
- 320 Public Speaking.** Organization and composition of the public speech. Practice in the application of these principles and methods. 4 credits.
- 321 Parliamentary Law.** Practice in applying rules of order to group meetings where parliamentary procedure is followed. 2 credits.
- 325 Discussion and Conference Leadership.** Study and application of problem-solving discussion. 3 credits.
- 331 Oral Interpretation.** Theory and practice in oral reading, with emphasis on selection, study, and presentation of literature suited for oral interpretation. Prerequisite: Speech 161 or 172, English 162 or 172. 3 credits.
- 371 Survey of Radio and Television Techniques.** Survey of telecasting: history, growth, social aspects, laws, policies, status; network organizations, programming, standards of criticism, and comparative broadcasting systems. Nontechnical study of radio and television; medium and product. Prerequisite: English 263 or 273. 4 credits.

- 380 Anatomy and Physiology of the Ear and Vocal Mechanism.** Basic embryology, neurology, bone and cartilaginous structures of the hearing and speech functions. 3 credits.
- 381 Speech Science.** Anatomy and physiology relating to the hearing and speech functions; physics of sound; basic experimental phonetics. 3 credits.
- 382 Speech Pathology I.** Etiology, diagnosis, and treatment of common speech disorders, concentration on delayed speech and articulation disorders. 3 credits.
- 384 Speech Reading.** Training in lip-reading and visual hearing for the hard-of-hearing person. Theory, techniques, and materials for teaching lip-reading. 3 credits.
- 441 Technical Theatre Workshop.** A laboratory course; experience in meeting technical problems of educational theatre production. Prerequisite: Speech 236. 4 credits.
- 445 Theatre Make-up and Costuming.** Theory and practice, survey of historical costume pertinent to theatre, techniques of stage costume construction. Prerequisite: Speech 234 or 235. 2 credits.
- 453 Methods in Public School Speech Correction.** Objectives and procedures. 2 credits.
- 454 Diagnosis and Appraisal in Speech Pathology and Audiology.** Evaluation and use of diagnostic tools. Includes participation in diagnostic evaluations and preparation of clinical reports. Prerequisites: Speech 285, 293, 381, 382. 3 credits.
- 480 Practicum in Speech Pathology and Audiology.** Supervised training in therapeutic techniques. Open only to majors in speech correction. Prerequisite: Speech 454. 2-3 credits. This course may be repeated to a maximum of 6 credits.
- 482 Speech Pathology II.** Continuation of Speech 382. Etiology, diagnosis, and treatment of speech disorders involving voice, rhythm, and symbols. 3 credits.
- 483 Hearing Conservation.** Theory related to hearing; physiology; classification of hearing defects. Audiometric testing and socio-educational adjustment. 4 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems.** A seminar or conference course for advanced students wishing to work out a special problem in speech. 1-4 credits.
- 420-520 Persuasion.** Added emphasis to uses of effective extemporaneous speech; psychological elements in audience-speaker situation. Motivation, attention, suggestion; and ways and means of winning audience response. 3 credits.
- 426-526 Argumentation.** Oral argumentation, with practical experience in dealing with contemporary problems, using the medium of debate. Special emphasis given to developing habits of critical thinking. 3 credits.
- 428-528 Speech Criticism.** Analysis of rhetorical principles applied to public address. Prerequisite: Speech 320, 325. 3 credits.
- 442-542 Theory and Practice of Stage Lighting.** Development of stage lighting; basic needs; cost and types of equipment. Prerequisite: Speech 236. 2 credits.
- 444-544 Acting and Directing Workshop.** A laboratory course; experience in meeting problems in acting and directing in educational theatre production. Prerequisite: Speech 235. 4 credits.
- 446-546 Theory and Practice of Scene Design I.** Development of scenic design; basic needs and procedures in designing plays. Prerequisite: Speech 235, 236. 2 credits.
- 447-547 Theory and Practice of Scene Design II.** Continuation of Speech 446. Prerequisite: Speech 446. 2 credits.
- 448-548 Theory and Technique of Acting.** Methods of interpreting characters in plays for educational theatre production. Prerequisite: Speech 235. 3 credits.
- 449-549 Theory and Technique of Directing.** Methods of casting and directing suitable plays for educational theatre production. Prerequisite: Speech 235. 3 credits.

- 452-552 Teaching of Speech.** Materials and methods of speech in high school. 2 credits.
- 491-591 Drama: The Beginnings to Ibsen.** World drama, its origin and genesis. Primitive drama, Classical Greek and Roman, Oriental, Medieval, Elizabethan, Neo-Classical, French, Restoration, Eighteenth Century, to 1875. 4 credits.
- 492-592 The Modern Drama: Ibsen to World War II.** Literature and production techniques of the modern theatre. 4 credits.
- 493-593 Contemporary Drama.** Trends in the literature and production techniques of the present-day theatre. 4 credits.
- 495-595 Speech and English Workshop.** For advanced students in English and Speech. Area limited and specific subjects selected before the opening of the summer session. 3 to 8 credits.
- 496-596 Summer Theatre Workshop.** Theatre production for advanced students in residence at the professional Theatre L'Homme Dieu, Alexandria, Minnesota. Production of 10 plays in 11 weeks. Acting, directing, costuming, construction, publicity, lighting, and other disciplines of the theatre. Registration by application only. 1-8 credits.

COURSES FOR GRADUATE STUDENTS

- 501 Advanced Clinical Practice in Speech Therapy and Audiology.** The more uncommon types of speech and hearing disorders. 1-3 credits.
- 502 Psychogenic Disorders of Speech.** Stuttering, hysterical aphonia, and other psychosomatic speech deviations. 3 credits.
- 503 Research in Speech Pathology.** Tools to evaluate methods and results of original research. Experimental design, statistical measures. 2 credits.
- 504 Advanced Audiology.** Above-threshold audiometric testing. Objective audiometry. Aid fitting. Auditory training. 3 credits.
- 505 Organic Disorders of Speech.** Etiology, diagnosis, and treatment of disorders caused by cleft palate and lip, laryngeal cancer, and other organic pathologies. 3 credits.
- 506 Speech Disorders and Damages to Central Nervous System.** Cause, diagnosis, and treatment of disorders occasioned by cerebral palsy and aphasia. 2 credits.
- 507 Experimental Phonetics.** Research in Speech Science not strictly devoted to therapeutic work in speech and hearing. Field trips to near-by laboratories and manufacturing concerns. 2 credits.
- 521 Seminar in American Public Address.** 3 credits.
- 522 Critical Studies in Oratorical Theory.** Major Greek and Roman works in Rhetoric. 3 credits.
- 539 Seminar in Acting and Directing.** 3 credits.
- 550 Seminar in Speech Education.** 3 credits.
- 560 Seminar in Technical Problems of the Theatre.** 3 credits.
- 561 Seminar in Theatre History.** 3 credits.
- 599 Master's Project.** Controlled research in selected areas of speech and theatre.

LANGUAGE ARTS

Also see programs offered by English, Speech and Dramatic Art, and Library Science.

BACHELOR OF SCIENCE

- | | |
|--|--------------------------------------|
| Language Arts Major (84) | 334 Descriptive Grammar (4) |
| 235 Introduction to Theatre (4) | 343 Shakespeare (4) |
| 320 Public Speaking (4) | 452 Language Arts Methods (4) |
| 325 Discussion, or | 4 period courses in English |
| 426 Argumentation (3) | Literature (12) |
| 331 Advanced Composition (2) | 3 period courses in American |
| 333 The English Language (4) | Literature (9) |

English Emphasis (34)

- 293 Introduction to Speech Disorders (3)
- 331 Oral Interpretation (3)
- 321 Parliamentary Law (2)
- 353 Adolescent Literature (3)
- 401 Literary Theory and Criticism (3)
- 446 Communication Media (3)
 - Electives in Literature (to include one English period course or Recent European Literature) (13)
 - Electives in English, Speech, or Journalism (4)

Speech Emphasis (34)

- 236 Technical Production Methods I (2)
- 293 Introduction to Speech Disorders (3)
- 321 Parliamentary Law (2)
- 331 Oral Interpretation (3)
- 426 Argumentation, or
 - 325 Discussion (3)
- 428 Speech Criticism (3)
- 448 Theory and Technique of Acting (3)
- 449 Theory and Technique of Directing (3)
 - 1 Drama Course (491, 492, or 493) (4)
 - Electives in English, Speech, or Journalism (8)

Library Science Emphasis (34)

- 251 Children's Literature (4)
- 353 Adolescent Literature (3)
- 376 Materials for Secondary School Library (4)
- 377 Functions of School Library (4)

- 378 Materials for Elementary School Library (4)
- 476 Secondary School Library Collection (4)
- 477 School Library Reading Program (4)
- 478 School Library Reading Program (4)
- 478 Use of Materials in Elementary School Library (2)
- 479 Functions of School Library (2)
 - 1 English Period course, or Recent European Literature (3)

Journalism Emphasis (34)

- 211 College Yearbook (2), or
 - 213 College Newspaper (3)
- 248 Reporting and Newswriting (4)
- 344 Editing and Makeup (3)
- 353 Adolescent Literature (3)
- 348 Editorial Writing (2)
- 441 Magazine Article Writing (2)
- 446 Communication Media (3)
- 449 School Public Relations (3)
- 455 The High School Newspaper (3)
- 456 The High School Yearbook (2)
 - 1 English period course, or Recent European Literature (3)
 - Electives in English or Speech (3-4)

Elementary Education Language Arts Minor (36)

- 234 Recreational Dramatics (3)
- 331 Oral Interpretation (3)
- 331 Advanced Composition, or
 - 332 Advanced Composition (2)
- 333 The English Language (4)
 - Electives in English, Speech, Journalism (9)
 - Electives in Literature (15)

(Course descriptions are available in respective departments.)

SCIENCES

Also see programs offered by Biology, Chemistry and Physics.

Course offerings in the physical and biological sciences are designed to provide sound basic preparation and competence in the science area needed by teachers and other workers in scientific and related fields. Many of the courses are open to other students who wish a better background in science or who have avocational interests in science.

Biol. 101, Chem. 102, Phys. 103, Biol. 104, Science 206, 207, 401-501, Biol. 402-502 and 403-503 are designed to help the general student understand the natural world and the age of science and technology, and to make intelligent use of scientific discoveries.

Credit may be earned in Biol. 101, Chem. 102, Phys. 103, Biol. 104, Chem. 211 and Phys. 231 by comprehensive examination.

BACHELOR OF SCIENCE**General Science Major (84)**

- Biol 349 Prin. Resource Mgt. (4)
- Bot 245, 246 General Botany (8)
- Chem 211, 212 General Chemistry (8)
- Chem 221 Organic Chemistry (4)
- Math 221 College Algebra (4)
- Math 224 Trigonometry (4)
- Phys 231 Mechanics (4)
- Phys 232 Magnetism and Elect. (4)
- Phys 233 Heat, Light, Sound (4)
- Phys 332 Electronics (4)
- Sci 307 Field Geology (4)

Sci 453 Teaching Secondary (4)
 Zool 241, 242 General Zoology (8)
 Electives (Biological Science) (8)
 Electives (Science and Math — recommend total in either Chem. or Phys. be 24) (12)

Physical Science Major (84)

Bot 245 General Botany (4)
 Chem 211, 212 General Chemistry (8)
 Chem 223 Qualitative Analysis (4)
 Chem 321, 322 Organic Chemistry (8)
 Chem 325 Quantitative Analysis (4)
 Math 221 College Algebra (4)
 Math 224 Trigonometry (4)
 Phys 231 Mechanics (4)
 Phys 232 Magnetism and Elect. (4)
 Phys 233 Heat, Light, Sound (4)
 Phys 328 Atomic Physics (5)
 Phys 329 Nuclear Physics (4)
 Phys 332 Electronics (4)
 Sci 453 Teaching Secondary Science (4)

Zool 241 General Zoology (4)
 Electives (Physical Science and Math — selected so total in either Chem or Phys to be 36) (15)

General Science Minor (36)

Biol 349 Principles of Resource Mgt. (4)
 Bot 245 General Botany (4)
 Chem 211, 212 General Chemistry (8)
 Phys 201 Mechanics and Heat (4)
 Phys 202 Elect, Magnetism, Light (4)
 Sci 307 Geology (4)
 Science Electives (senior college) (4)
 Zool 241 General Zoology (4)

Physical Science Minor (36)

Chem 211, 212 General Chemistry (8)
 Chem 223 Qualitative Analysis (4)
 Chem 221 Organic Chemistry (4)
 Phys 231, 232, 233 General Physics (12)
 Phys 332 Electronics (4)
 Science 306 or 307 (4)

COURSE DESCRIPTIONS

- 206 Earth Science.** Identification of rocks, minerals, and fossils. Geology of Minnesota and local area. Solar system, stars, and constellations. Use of simple methods and instruments, guides and keys. Laboratory. 4 credits.
- 207 Concepts in Modern Science.** Contemporary theories in science, their development from a historical point of view, and their effect upon human thought and culture. The methods and the great central ideas of science are emphasized. 4 credits.
- 306 Astronomy.** Astronomical instruments. Solar system configurations and energy relations. Stellar distances and motions. Stars and constellations. Binary stars. Variable stars. Galaxies. Cosmogony. Prerequisite: Physics 233 or Physics 236. 4 credits.
- 307 Geology.** Physical geology; rocks and minerals, mountain building, volcanism, erosion, and Bowen's reaction series. Historical geology. Collection of rocks, minerals, and fossils. Lecture, field, and laboratory. Prerequisite: Chemistry 212. 4 credits.
- 327 Experiences in Physical Sciences for Elementary Teachers.** Construction and evaluation of individual projects, demonstrations, and teaching materials, using readily available materials, for more purposeful and meaningful instruction in physical science concepts. Laboratory. 3 credits.
- 453 Teaching Science in Secondary Schools.** Desirable functional outcomes of science teaching; planning purposeful units of work; effective use of experimentation, demonstrations, field trips, projects, textbooks, audio-visual aids, and other instructional methods and devices; science equipment and materials; evaluation of science learning. Prerequisite: Senior college work in science. 4 credits.

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 400-500 Special Problems.** A seminar or conference course for advanced students wishing to work out a special problem in Science. 1-4 credits.
- 401-501 Major Developments in Physical Sciences.** General education course employing selected science experiences as a basis for explanations of major developments in areas of physical science and their significance. Not open to students with majors or minors in physical science. 4 credits.

- 408-508 Physical Science Techniques.** Construction, repair, and calibration of laboratory instruments and demonstration devices; preparation and standardization of solutions; checking balances; simple glass blowing techniques; apparatus assembly and checking. Laboratory. Prerequisite: Two years of physical science. 2 credits.
- 420-520 Seminar.** Lectures, readings, discussion on selected topics. May be repeated. 1-4 credits.
- 451-551 Teaching Science in Elementary Schools.** History and trends; contributions of science in the curriculum; preparation of teaching aids utilizing newer and readily available materials, evaluation of teaching procedures, materials, books, field trips, museums, science fairs, and other devices for meaningful science instruction. Prerequisite: Science 324 or consent of division. 3 credits.

COURSES FOR GRADUATE STUDENTS

- 504 Seminar in Elementary Science Problems.** Individual and group study of problems connected with teaching elementary science and development of a functional science program at elementary level; analysis and use of researches in elementary science education. 4 credits.
- 510 Science Colloquium.** Individual study and reporting of selected specific science topics. 1 credit per quarter.
- 552 Workshop for Science Teachers.** Work on curricular or teaching problems in science by individuals or groups of teachers desiring to improve science programs. Experiences will be varied according to needs and problems of registrants who will have opportunities to utilize services of various staff members. 4 credits.
- 553 Problems in Teaching Junior and Senior High School Science.** Analysis of high school science courses in light of social and personal needs and changing conditions, use of research findings in improving science instruction, survey and use of resources in science teaching, adjustments to differences in interests, aptitudes, and vocational goals, evaluation. Prerequisite: A major or minor in science. 4 credits.
- 599 Master's Project.** 3 credits.

SOCIAL SCIENCES

Also see programs offered by Geography, History, Economics, Political Science, Sociology, and Social Studies.

BACHELOR OF SCIENCE

Social Sciences Major (48)

- 260 Principles of Sociology (4)
 272 Principles of Economics (5)
 281 American Government—Political Science (4)
 Sociology 465 Social Psychology
 or
 Sociology 467 Cultural Anthropology (4)
 382 State Government—Political Science (3)
 471 Economics, Money and Banking (4)
 Electives in Sociology, Economics and Political Science (16)
 353 Teaching in Secondary Social Studies (4)
 Electives in Geography or History (4)

Social Sciences Minor (36)

- 260 Principles of Sociology (4)

- 272 Principles of Economics (5)
 281 American Government—Political Science (4)
 465 Sociology, Social Psychology
 or
 467 Sociology, Cultural Anthropology (4)
 382 State Government—Political Science (3)
 471 Economics, Money and Banking (4)
 Electives in Sociology or Economics or Political Science (4)
 353 Teaching of Secondary Social Studies (4)
 Electives in Geography or History (4)

Elementary Education

Social Science Minor (36)

- Soc 260 Principles of Sociology (4)
 Econ 272 Principles of Economics (5)
 PolSci 281 American Government (4)

- Soc 465 Social Psychology
or
467 Cultural Anthropology (4)
- PolSci 382 State Government (3)
Econ 372 Modern Problems (3)
Electives in Social Science (13)

COURSE DESCRIPTIONS

- 104 General Social Science.** Economic, political, and sociological factors which affect the person in contemporary American society. Analysis of problems designed to lead student to understanding of social - economic - political complexities and responsibilities of day-by-day living in contemporary world. 4 credits.
- 401 Concepts in Social Science.** Application of economic, political, and sociological concepts to issues in contemporary societies. Prerequisite: Social Science 104. 4 credits.
- 472-572 Methods in Social Research.** Philosophy in science as related to formulation of research problems, techniques for collecting and analyzing social data, process of interpreting results. 2 credits.

SOCIAL STUDIES

Also see programs offered by Economics, Political Science, History, Geography, Sociology and Social Sciences.

BACHELOR OF SCIENCE

Social Studies Majors (84)

Geography Emphasis

- A minimum of five topical courses and five regional courses in Geography is required (40)
History electives (8)
260 Principles of Sociology (4)
272 Principles of Economics (5)
281 American Government (4)
One elective each in Political Science, Economics, Sociology (11)
Social Studies 353 Teaching of Secondary Social Studies (4)
Electives in related areas (8)

History Emphasis

- A minimum of one course in each of the four fields of Ancient, Medieval, Modern European, and American History is required (40)
One regional and one topical course in Geography (8)
260 Principles of Sociology (4)
272 Principles of Economics (5)
281 American Government (4)
One elective each in Political Science, Economics, Sociology (11)
Social Studies 353 Teaching of Secondary Social Studies (4)
Electives in related areas (8)

320 Elements of Social Studies. Concepts in social studies appropriate for the elementary school. 3 credits.

353 Teaching Social Studies in Secondary School. Fundamental principles, recommended practices, and valid techniques in teaching social studies courses in the high school. 4 credits.

Social Sciences Emphasis

- 260 Principles of Sociology (4)
272 Principles of Economics (5)
281 American Government (4)
Sociology 465 Social Psychology
or
Sociology 467 Cultural Anthropology (4)
Political Science 382 State Government (3)
Economics 471 Money and Banking (4)
Electives in Sociology, Economics and Political Science (24)
One topical and one regional course in Geography (8)
History Electives (8)
Social Studies 353 Teaching of Secondary Social Studies (4)
Electives in related areas (16)

Elementary Education Social Studies Minor (36)

- PolSci 281 American Government (4)
Econ 272 Principles of Economics (5)
Soc 260 Principles of Sociology (4)
Geog 271 Economic or 273 Physical (4)
One 200 level History course (4)
One additional course from 4 of the 5 areas (15)

COURSES FOR ADVANCED UNDERGRADUATE AND GRADUATE STUDENTS

- 410-510 Field Work.** Summer field study of a selected region of the United States from the viewpoint of one or more of the social studies; to include pre-trip and post-trip work. 8 credits.
- 455-555 Workshop in Conservation and Conservation Education.** A wide range of experiences designed to help teachers plan and implement their teaching of conservation; curriculum planning, group work, conferences, demonstrations, lectures, field trips, and evaluation of audio-visual aids. The workshop is conducted by the Departments of Social Sciences and Science. 4 credits.

ALL COLLEGE COURSES

CURRENT ISSUES

- 432 General Education Current Issues.** Significant problems and important issues that face man. An interdisciplinary, interdivisional course designed to provide the senior student an opportunity for integrating learning experiences. Recommended to be taken the student's final quarter. 2 credits.

EDUCATIONAL TOURS

- (Name of Department) 410-510 Educational Tours.** Tours taken under supervision of the College. Exact nature of course will be defined by the department involved and approved by the administration. 1 to 8 credits.

GREAT ISSUES

- 401-501, 402-502, 403-503 Great Issues.** Organized around a different theme each year. Emphasis on interdisciplinary approach to significant problems and important issues. Offered jointly by St. Cloud State College, St. John's University, and the College of St. Benedict. Open to students by invitation. 2 credits per quarter for three consecutive quarters for total of 6 credits.

GROUP LEADERSHIP

- 202 Personal and Social Living.** Needs, concepts, standards, and skills which will result in a personal-social-civic orientation to successful living. 1 credit.
- 203 Orientation Leadership.** Assisting new students in becoming oriented to the campus and to their college responsibilities. The leadership experience is preceded by classroom instruction during spring quarter. Enrollment limited to selection by the Administration. 1 credit.
- 205 Junior Red Cross.** Program and its training for social service, good citizenship, world understanding through civic, national, and international activities. 1 credit.
- 210 Girl Scout and Campfire Girl Leadership.** Practical work of leadership. Girl Scouting given one year and Campfire Girl Leadership the next. 1 credit.
- 211 Elements of Scout Leadership.** Psychological and sociological principles; actual practice in Scout activities. 1 credit.
- 212 Troop Camping.** Camp organization, sanitation, balanced rations, and a full camping program of outdoor play and work activities. 1 credit.
- 215 4-H Club Organization and Leadership.** Group organization in rural communities. Utilizing school in carrying out a home or community project. Prerequisite: Sociology 260. 2 credits.
- 217 Recreation Leadership.** Camping in private and organizational camps presented by specialists; actual experience in living out of doors. 4 credits.

- 310 Group Leadership.** Principles and practices applied to school clubs, home room activities, extra-curricular activities in general, and community organizations. Supervised practice in leadership. 4 credits.
- 320 Parent-Teacher Movement.** Objectives, principles, procedure, and publications of parent-teacher movement. 1 credit.

ORIENTATION

- 021 Introduction to College.** Orientation to the curriculum, the library, college regulations and standards; interpretation of tests results. Required of all new students, with the exception of students transferring 48 credits or more from another college, during the first quarter of residence. **Completion required for Admission to a Major Program of Studies.** 1 credit. (Not applicable toward degree.)

FACULTY

1963-1965

BUDD, George Fitch, President, 1952-

B.S., State Teachers College, Buffalo, N. Y.; M.A., Ed.D., Teachers College, Columbia University.

ADAMS, Algalee Poole, Associate Professor of Art, 1951-

B.S., University of Missouri; M.A., University of Missouri; Ed.D., Pennsylvania State University.

ADAMS, John E., Instructor in Geography, 1961-

B.A., M.A., University of Minnesota.

ANDERSON, Roger C., Instructor in Education, 1962-

B.S., Mankato State College; M.A., University of Minnesota.

ANDERSON, Rowland C., Professor of Mathematics, 1939-43; 48-

B.E., St. Cloud State College; M.A., University of Minnesota; M.S., Purdue University; EdD., Columbia University, N. Y.

APPLEGATE, Irvamae, Professor, Dean, School of Education, 1956-

B.S., North Dakota Agricultural College; M.A., Ph.D., University of Minnesota.

ARNDT, Russell T., Instructor in Chemistry, 1959-

B.S., Bemidji State College; M.S., North Dakota State University.

AXEEN, Marina E., Assistant Professor, Reference Librarian, 1957-

B.S., St. Cloud State College; B.S. in L.S., M.S., University of Minnesota.

BALCER, Charles L., Professor, Academic Dean, 1954-56; 1957-

B.S., Winona State College; M.A., Ph.D., State University of Iowa.

BALL, Lyle E., Professor, Dean, School of Business and Industry, 1957-

B.S., Illinois State Normal University; M.S., University of Illinois; J.D., University of North Dakota.

BARBEE, Albert R., Instructor in Mathematics, 1961-

B.S., U. S. Naval Academy; M.S., Purdue University.

BARGABUS, Alma, Instructor in Social Science, 1961-

B.S., M.S., St. Cloud State College.

BARKER, Hugh, Professor of Biology, 1946-

B.Ed., Whitewater, Wisconsin, State College; Ph.M., Ph.D., University of Wisconsin.

BARRETT, Mary Louise, Assistant Professor of Art, 1957-

B.A., Michigan State University; M.S., University of Wisconsin; M.F.A., Cranbrook Academy of Art.

BARRETT, Roger Lee, Associate Professor of Music, 1949-

B.M.E., M.M., Drake University, Des Moines, Iowa; Ph.D., State University of Iowa.

BAURIES, Fred B., Instructor, Assistant Director of Information Services, 1962-

B.A., University of Minnesota.

BENNETT, Florence Dunn, Instructor in Education, 1953-

B.S., St. Cloud State College.

BENNING, Barbara Ann, Instructor in Physical Education, 1962-

B.S., Northwest Missouri State College.

BENSON, Robert G., Assistant Professor of Business Administration, 1958-

B.S., M.S., St. Cloud State College.

BIEGLER, Marjorie Ann, Instructor in Physical Education, 1958-

B.S., Bemidji State College; M.S., University of Southern California.

BJORGO, Maynard, Instructor, Periodicals Librarian, 1958-

B.S., University of Chicago; B.S., Moorhead State College; M.A., University of Minnesota.

*On leave of absence, 1962-63.

- BLEICK, Frances A., Associate Professor of Physical Education, 1958-**
B.S., University of Nebraska; M.A., New York University; Dr. P. E., Indiana University.
- BOCK, Luanne, Instructor in Education, 1962-**
B.S., St. Cloud State College.
- BOLLOM, William J., Instructor in Accounting, 1962-**
B.B.A., M.B.A., University of Wisconsin.
- BRAINARD, Albert Franklin, Professor of Physical Education, 1930-**
B.S., M.A., University of Illinois; EdD., New York University.
- BRINK, Allen L., Assistant Professor of Mathematics, 1959-**
B.A., Concordia College, Moorhead; M.Ed., University of North Dakota; M.S., University of Illinois.
- BROWN, Luther, Professor, Director, Bureau of Instructional Resources, 1956-**
B.S., Northeastern (Oklahoma) State College; M.S., Oklahoma A. & M. College; Ph.D., George Peabody College for Teachers.
- BROWN, Robert Harold, Professor of Geography, 1949-51; 1953-**
B.S., M.A., University of Minnesota; Ph.D., University of Chicago.
- BRUTON, Charles, Assistant Professor of Biology, 1957-**
B.S., M.S., Oklahoma State University.
- CADWELL, L. Ruth, Assistant Professor of Education, 1924-**
B.A., Iowa State Teachers College; M.A., University of Minnesota.
- CAIRNS, Paul E., Professor of English, 1957-**
B.A., Adrian (Michigan) College; M.A. (Speech), M.A. (English), Ph.D., University of Michigan.
- CAMPBELL, Eleanor L., Instructor in Elementary Education, 1955-**
B.S., Moorhead State College; M.A., University of Minnesota.
- CARLSEN, Myrl Nita, Assistant Professor of Music, 1926-**
B.A., Carleton College; M.A., Columbia University.
- CARLSON, Kent F., Instructor in Mathematics, 1962-**
B.S., University of North Dakota; M.A., Washington State University.
- CATES, Edwin Hines, Professor of History, 1946-**
A.B., A.M., Ph.D., State University of Iowa.
- CHRISTENSON, Richard Dale, Instructor, Assistant Registrar, 1961-**
B.S., M.S., St. Cloud State College.
- CLUGSTON, Herbert A., Professor of Psychology, 1931-**
B.A., DePauw University; B.D., Garret Biblical Institute; M.A., Ph.D., University of Colorado.
- COARD, Robert L., Assistant Professor of English, 1960-**
A.B., Quincy College; M.A., Ph.D., University of Illinois.
- COLLETTI, Edward M., Assistant Professor of Physical Education, 1932-44; 1946-**
B.E., St. Cloud State College; M.Ed., University of Minnesota.
- COLOMY, Mary Thielman, Instructor in Psychology, 1948-**
B.E., St. Cloud State College; M.A., University of Minnesota.
- CONLIN, Marguerite, College Nurse, 1958-**
R.N., St. Mary's Hospital Training School, Minneapolis.
- CONNER, Arthur B., Associate Professor of Foreign Languages, 1962-**
A.B., University of Southern California; M.A., Ph.D., State University of Iowa.
- CONNER, William Boudinot, Assistant Professor of Foreign Languages, 1961-**
A.B., Oberlin College; A.M., University of Illinois.
- COOK, Eva Ellen, Instructor in Cerebral Palsy Unit, 1955-**
B.S., St. Cloud State College; M.S., Syracuse University.
- COURTER, Eloise Norma, Assistant Professor of English, 1958-**
B.A., Douglas College, New Brunswick, N. J.; M.A., Teachers College, Columbia University.
- COX, Robert H., Instructor in Business Administration, 1962-**
B.A., Michigan State University; M.B.A., University of Kentucky.

*On leave of absence, 1962-63.

- CRANE, Charles Lloyd, Instructor in Art, 1958-**
B.A., M.A., Michigan State University.
- CRAWFORD, Audrey Robison, Instructor in Education, 1949-**
B.S., Mankato State College; M.A., University of Minnesota.
- CURRAN, Charlotte Ruth, Instructor in Physical Education, 1948-**
B.S., University of Minnesota; B.A., M.A., Colorado State College of Education.
- DAGGETT, Clair Edwin, Professor of Business Administration, 1939-42; 1945-**
B.E., Whitewater, Wisconsin, State College; M.A., Ph.D., State University of Iowa.
- DALE, Amy Helene, Assistant Professor of English, 1931-44; 1945-**
B.A., Macalester College, St. Paul; M.A., Colorado State College of Education.
- DAVIS, James W., Assistant Professor of Political Science, 1959-**
B.A., Valley City Teachers College; M.A., Ph.D., University of Minnesota.
- DELZOPPO, Claude Francis, Instructor in Sociology, 1957-**
B.S., M.S., St. Cloud State College.
- DETRA, Guido David, Assistant Professor of Industrial Arts and Driver Education, Supervisor, Printing and Duplicating Services, 1956-**
B.S., St. Cloud State College; M.A., Colorado State College.
- DONNELLY, William Alfred, Assistant Professor of English and Journalism, 1948-**
B.A., University of Notre Dame; M.A., Teachers College, Columbia University.
- DULL, Alyn Neil, Assistant Professor of Mathematics, 1956-**
B.S., St. Cloud State College; M.Ed., University of South Dakota.
- EMERY, Charles Wilson, Professor of Education, Director of Placement, Director of Alumni Relations, 1945-**
B.Ed., Eau Claire, Wisconsin, State College; M.A., State University of Iowa; Ed.D., Colorado State College of Education.
- ENGLISH, Alice Lund, Instructor in Education, 1959-**
B.S., St. Cloud State College.
- ERICKSON, George Otto, Instructor in Audio-Visual Education, 1951-**
B.S., M.S., St. Cloud State College.
- ERICKSON, John M., Associate Professor of Chemistry, 1960-**
B.S., University of Wisconsin; M.S., South Dakota State College; Ph.D., Iowa State University.
- ERICKSON, Ramona, Instructor in Education, 1962-**
B.S., Bemidji State College.
- ERNST, Charles, Instructor in Education, 1962-**
B.S., St. Cloud State College; M.A., State University of South Dakota.
- ESBECK, Edward S., Instructor in Business Administration, 1961-**
B.S., Drake University, Des Moines, Iowa; M.A., State University of Iowa.
- FERGUSON, George B., Associate Professor of English, 1960-**
B.A., University of Minnesota; B.S., M.S., St. Cloud State College; Ph.D., University of Illinois.
- FOLKERTS, Carl J., Professor of Economics, 1949-**
B.A., Iowa State Teachers College; M.A., Ph.D., State University of Iowa.
- GANT, Ruth, Instructor in Music, 1946-**
B.Mus., Jordan Conservatory of Music; M.Mus., Chicago Musical College.
- GILBERT, Floyd, Professor of Psychology, 1937-**
B.A., M.A., University of Minnesota; Ed.D., University of North Dakota.
- GOEHRING, Harry Herbert, Professor of Biology, 1946-**
B.E., Milwaukee, Wisconsin, State Teachers College; Ph.M., University of Wisconsin; Ed.D., University of North Dakota.
- GOEMER, June M., Instructor in Physical Education, 1957-**
B.S., M.Ed., University of Minnesota.
- GOWER, Calvin W., Associate Professor of History, 1957-**
B.A., Western State College, Gunnison, Colorado; M.A., University of South Dakota; Ph.D., University of Kansas.

*On leave of absence, 1962-63.

- GRABOWSKA, Melvin F., Assistant Professor of Education, 1962-**
B.S., Northern State Teachers College; M.S., Ph.D., University of Wisconsin.
- *GRETHER, David Frank, Assistant Professor of Biology, 1952-53; 1956-**
Ph.B., M.S., University of Wisconsin.
- GRUNERUD, James Albert, Associate Professor of Education, 1959-**
B.A., B.S., University of Saskatchewan, Saskatoon, Canada; M.A., University of Minnesota; Ph.D., University of California.
- HANNAH, Mary E., Instructor in Speech, 1962-**
A.B., Grinnell College; M.A., State University of Iowa.
- HALL, Robert R., Instructor in Business Administration, 1958-**
B.S., St. Cloud State College; M.A., Colorado State College, Greeley.
- HANSON, Richard A., Instructor in Education, 1961-**
B.S., St. Cloud State College.
- HANSON, Robert W., Associate Professor of Chemistry, 1953-**
B.A., Bemidji State College; M.S., University of Minnesota; Ph.D., State University of Iowa.
- HARRINGTON, John C., Instructor, Director, Bureau of Physical Resources, 1962-**
B.S., M.Ed., University of Illinois.
- HASELHUHN, Ronald Paul, Instructor, Bibliography and Catalog Librarian, 1961-**
B.F.A., Municipal University of Omaha; M.A., University of Denver.
- HEIN, Robert D., Instructor in Education, 1962-**
B.A., Hamline University; M.A., University of Minnesota.
- HIRD, Louis R., Instructor in Mathematics, 1960-**
B.S., U. S. Naval Academy; M.S., Purdue University.
- HOLLOWAY, B. J., College Nurse, 1960-**
Registered Graduate Nurse, St. Joseph Mercy Hospital School of Nursing, Dubuque, Iowa.
- HOLLOWAY, Ralph Selah, Associate Professor of Sociology, 1956-**
B.A., University of Toledo; M.A., Ph.D., State University of Iowa.
- HOLMGREN, Marvin Edward, Professor of Education, Coordinator of Graduate Studies, 1949-**
B.S., St. Cloud State College; M.A., Ph.D., University of Minnesota.
- HOMSTAD, Evelyn E., Instructor in English, 1955-**
B.A., Hamline University, St. Paul; M.S., St. Cloud State College.
- HOPKINS, Harold H., Professor of Biology, 1957-**
A.B., M.S., Fort Hays (Kansas) State College; Ph.D., University of Nebraska.
- HOPWOOD, Alfred J., Assistant Professor of Biology, 1962-**
B.S., Colorado State University.
- HOUSMAN, Arthur L., Professor of Speech and Theatre, 1956-**
B.A., DePauw University; M.A., Ph.D., State University of Iowa.
- HOUTZ, John C., Instructor in Education, 1961-**
B.S., St. Cloud State College; M.Ed., Trinity University.
- HOWARD, Charles E., Jr., Instructor in Speech and Theatre, 1961-**
B.A., Bard College, Annandale-on-Hudson, N. Y.; M.F.A., Carnegie Institute of Technology, Pittsburgh, Pa.
- HULS, Helen Steen, Instructor in Music, 1926-**
B.Mus., M.Mus., Northwestern University.
- INGWELL, Paul Elmer, Professor of Psychology, 1955-**
B.S., M.S., Stout State College, Menomonie, Wisconsin; Ph.D., University of Minnesota.
- JACKSON, Andrew S., Instructor in Physical Education, 1962-**
B.S., St. Cloud State College.
- JACOBSON, Joan, Associate Professor of Speech, 1962-**
B.A., Morningside College; M.A., Ph.D., Syracuse University.

*On leave of absence, 1962-63.

- JAKSA, James A., Assistant Professor of Speech, 1962-**
A.B., Central Michigan University; M.A., University of Michigan; Ph.D., Wayne State University.
- JOHNSON, James A., Instructor in Education, 1962-**
B.S., River Falls State College; M.A., University of Minnesota.
- JONES, Jack Robert, Assistant Professor of Education, 1955-**
B.A., Tulane University; M.E., Wichita University.
- JONES, Mildred Maplethorpe, Instructor, Assistant Dean of Students, Director of Women's Activities, Director of Student Activities, 1956-**
B.A., M.A., State University of Iowa.
- KAMMERMEIER, Martin A., Instructor in Speech, 1962-**
B.S., St. Cloud State College.
- KASPER, John David, Professor of Physical Education, 1949-**
B.S., M.S., University of Wisconsin; P.E.D., Indiana University.
- KNOX, Stanley C., Assistant Professor of Special Education, 1962-**
B.S., M.A., University of Minnesota.
- KORSAK, Ronald Alexander, Instructor in Physics, 1960-**
B.S., California Institute of Technology; M.S., University of New Mexico.
- KORTE, Gerald J., Instructor in Education, 1961-**
B.S., M.S., St. Cloud State College.
- KRUEGER, Albert Herman, Professor of Psychology, Coordinator of Counselor Education, 1956-**
B.S., University of Wisconsin; M.Ed., Marquette; Ph.D., University of Wisconsin.
- KRUEGER, Harold Emil, Instructor in Music, 1960-**
A.B., Luther College, Decorah, Iowa; A.M., Colorado State College, Greeley.
- LEWIS, Edward D., Associate Professor of English, 1962-**
B.A., Yale University; M.A., University of Washington; Ph.D., Yale University.
- LAAKSO, John William, Professor of Biology and Chemistry, 1948-50; 55-**
B.E., Winona State College; M.S., Montana State College; Ph.D., University of Minnesota.
- LARSON, Raymond Howard, Professor of Industrial Arts, 1942, 1946-**
B.A., University of Nebraska; M.A., Ph.D., University of Minnesota.
- LARSON, Renae Miller, Instructor in Education, 1960-**
B.S., St. Cloud State College.
- LARSON, Walter Glesne, Instructor in Biology, 1960-**
B.S., St. Olaf College; M.A., Iowa State Teachers College.
- LEASE, Alfred A., Assistant Professor of Industrial Arts, 1959-**
B.S., M.S., St. Cloud State College.
- LIEBERMAN, Harold, Professor of Sociology, 1956-**
B.A., University of Toledo; M.A., University of Chicago; D.S.S., Syracuse University.
- LOHMANN, Victor Louis, Professor of Psychology, Director, Psychological Services Center, 1948-**
B.S., State Teachers College, Cape Girardeau, Missouri; M.A., Ed.D., University of Missouri.
- LOHRMAN, H. P., Professor of Sociology, 1942-**
B.S., M.A., Ohio University; Ph.D., Ohio State University.
- LUKER, Albert G., Professor of Psychology, 1956-**
B.S., M.A., University of South Dakota; Ed.D., Colorado State College.
- MADSEN, Russell, Instructor in Business Education, 1960-**
B.S., M.A., University of Minnesota.
- MAIER, Lucille Susanne, Instructor in Education, 1949-**
B.S., University of Minnesota; M.S., University of Wisconsin.
- MARKWARDT, Frederick Charles, Jr., Associate Professor of Psychology, 1960-**
B.A., Carleton College; M.A., Ph.D., University of Minnesota.

*On leave of absence, 1962-63.

MARLOW, Foster L., Instructor in Art, 1960-

B.S. in Ed., M.S. in Ed., Eastern Illinois University.

MARMAS, James G., Associate Professor, Chairman of Business Education Department, 1962-

B.S., St. Cloud State College; M.A., University of Minnesota; Ed.D., Stanford University.

MARTIN, Freda Ashley, Instructor in English, 1957-

B.S., M.S., Ohio University.

MARVEL, Lorene, Professor of Music, 1945-

B.A., Morningside College; B.M., M.Mus., MacPhail School of Music, Minneapolis; Ed.D., Teachers College, Columbia University.

McDERMOTT, Richard P., Associate Professor of Speech and Theatre, Director of Speech and Hearing Services, 1960-

A.B., University of Missouri; B.S., Western Michigan University; M.A., Ohio State University; Ph.D., State University of Iowa.

McDONALD, Brendan John, Instructor, Registrar, 1956-

B.S., St. Cloud State College; M.A., University of Minnesota.

McKEE, Eva P., Assistant Professor of Physical Education, 1947-

B.A., Iowa State Teachers College; M.A., Columbia University.

McWILLIAMS, Alexander S., Assistant Professor of Physics, 1962-

B.A., M.S., University of Connecticut; Ph.D., Ohio State University.

MEINZ, Richard John, Assistant Professor of English, 1946-

B.E., St. Cloud State College; M.A., University of Minnesota.

MENNINGA, Fred T., Associate Professor of Secondary Education, 1948-

B.A., Central College, Pella, Iowa; M.A., University of South Dakota; Ed.D., University of North Dakota.

MICHAEL, R. Keith, Assistant Professor of Speech and Theatre, Director of Theatre, 1960-

B.S., State Teachers College, Indiana, Pennsylvania; M.F.A., State University of Iowa.

MICHAEL, Marion B., Instructor in Speech and Theatre, 1961-

B.S., State Teachers College, Indiana, Pennsylvania; M.F.A., State University of Iowa.

MICHAELSON, Merle E., Associate Professor of Biology, 1959-

B.S., Wisconsin State College, River Falls; M.S., Colorado State University; Ph.D., University of Minnesota.

MICHALOS, Alexandros C., Instructor in Philosophy, 1962-

B.A., Western Reserve University; B.D., M.A., University of Chicago.

MOORE, Ben H., Instructor in Physics, 1960-

B.A., Park College; M.S., Kansas State University.

MORGAN, Cyril P., Instructor in Business, 1962-

B.S., Miami University, Oxford, Ohio; M.B.A., Xavier University.

MORK, Vernon Norton, Associate Professor of Secondary Education, 1958-

B.S., University of North Dakota; M.A., University of Minnesota; Ed.D., University of North Dakota.

MORSE, Marjorie J., Professor of History, 1951-

B.A., M.A., Ph.D., University of Wisconsin.

MORTRUDE, Gordon E., Instructor in Education, 1960-

B.S., Moorhead State College; M.S., St. Cloud State College.

MOSHIER, Ruth, Instructor, Catalog Librarian, 1958-

B.A., Marion (Indiana) College; B.S., Kansas State Teachers College, Emporia; M.A., University of Minnesota.

MOSS, Sue Holcomb, Instructor, Thomas J. Gray Campus Laboratory School Librarian, 1953-

A.B. in Ed., University of South Carolina; B.S., L.S., George Peabody College for Teachers.

*On leave of absence, 1962-63.

- MYERS, Joseph T., Assistant Professor of German and Russian, 1962-**
B.A., Louisiana State University; M.A., University of Arkansas; Ph.D., Vanderbilt University.
- NASH, Edwin A., Professor of Business Administration, 1947-**
B.A., State College of Iowa, Cedar Falls, Iowa; M.A., Ph.D., State University of Iowa.
- NASH, Richard Lawrence, Associate Professor of Psychology, 1958-**
B.A., University of Nebraska; M.S., Western Illinois University; Ed.D., University of Colorado.
- NEALE, Frances Elizabeth, Assistant Professor of Education, 1931-**
B.S., State Teachers College, Kirksville, Missouri; M.A., University of Missouri.
- NELSON, Arthur Fredrick, Professor of Chemistry, 1947-**
B.A., St. Olaf College; M.S., Ph.D., State University of Iowa.
- NEQUETTE, Etny Clell, Instructor, Circulation and Reserve Librarian, 1959-**
B.S., M.S., St. Cloud State College.
- NETZER, Donald Leo, Associate Professor of Geography, 1956-**
Ph.B., University of Wisconsin; M.A., Ph.D., University of Illinois.
- NEWMAN, Ted E., Assistant Professor of Economics, 1957-**
B.A., M.A., State University of Iowa.
- NUGENT, Grace S., Assistant Professor of Elementary Education, 1931-44; 1945-**
B.S., M.A., University of Iowa.
- NUNN, William Hiestand, Assistant Professor of History, 1954-**
B.S., M.S., North Texas State University.
- OLSON, Harry, Assistant Professor, Assistant Director of Placement, 1958-**
B.S., B.B.A., M.A., University of Minnesota.
- OPGRAND, Harold Jerome, Instructor, Technical Services Librarian, 1959-**
B.S., State Teachers College, Mayville, North Dakota; M.A., University of Minnesota.
- PARTCH, Max Lorenzo, Professor of Biology, 1949-**
B.S., University of Minnesota; Ph.D., University of Wisconsin.
- PEIK, Walter E., Instructor in Library Science and English, 1961-**
B.S., St. Cloud State College.
- PERKINS, Eugene Reed, Assistant Professor of Psychology, 1958-**
B.S., St. Cloud State College; M.A., University of Minnesota.
- PERRY, Floyd Page, Professor of Education, 1953-**
B.S., Eastern Oregon College of Education; M.A., Central Washington College of Education; Ed.D., Colorado State College.
- PETERSEN, Mary Louise, Instructor in Psychology, 1949-**
B.S., University of Minnesota; M.Ed., University of Oregon.
- PETERSON, Lars Peter, Associate Professor of Psychology, 1953-59; 1961-**
B.A., M.A., University of Wyoming; Ed.D., University of Nebraska.
- PHILLIPS, John N., Associate Professor of Philosophy, 1962-**
B.S., Northwestern University; M.A., University of Southern California; Ph.D., University of North Carolina.
- PIKE, Albert H. Jr., Associate Professor of History, 1961-**
B.A., Amherst College; M.A., Teachers College, Columbia University; Ph.D., University of Oregon.
- PITZER, James N., Assistant Professor of Speech and Theatre, 1961-**
B.A., Colorado State College; M.A., University of Denver.
- POLLOCK, Donald G., Professor of Elementary Education, 1956-**
B.S., Milwaukee (Wisconsin) State College; M.Ph., University of Wisconsin; Ed.D., University of Colorado.
- POTTER, Norman L., Instructor in English, 1961-**
B.A., Olivet College.
- RAWLAND, Perry Gardner, Associate Professor of Industrial Arts, 1942-**
B.A., State University of Iowa; M.A., Ohio State University; Ph.D., University of Minnesota.

*On leave of absence, 1962-63.

- RIGGS, Ronald Graham, Professor of Political Science, 1939-**
B.S., St. Cloud State College; B.A., M.Ed., University of Minnesota; Ed.D., University of North Dakota.
- ROBSON, John M., Instructor, Catalog and Curriculum Librarian, 1961-**
B.S., University of Nebraska; M.A., University of Denver.
- ROSSELT, William Richard, Instructor in Biology, 1961-**
B.S., Denison University; M.A., University of Michigan.
- ROWLAND, Howard Ray, Instructor, Director of Information Services, College Editor, 1959-**
B.J., University of Missouri; M.S., Southern Illinois University.
- RUSSELL, Mary F., Instructor in Education, 1961-**
B.S., College of St. Scholastica.
- RYAN, Robert D., Instructor in Industrial Arts, 1962-**
B.S., Wayne State College; M.A., Colorado State College.
- *SAHLSTROM, Stanley David, Associate Professor, Director, Bureau of Special Services, 1954-**
B.S., M.S., Ph.D., University of Minnesota.
- SATO, Henry, Instructor in Foreign Languages, 1962-**
Certificate of Physics-Chemistry-Biology, Faculté des Sciences, Paris, France.
- SCHARF, Mary Christine, Assistant Professor of Psychology, 1949-**
B.S., M.A., University of Minnesota.
- SCHELSKE, Alvin Herbert, Associate Professor of Education, Principal, Laboratory School, 1952-**
A.A., Rochester Junior College; B.S., Mankato State College; M.A., Ed.D., Teachers College, Columbia University.
- SERDULA, George, Associate Professor of Health and Physical Education, 1957-**
B.A., Muskingum College; M.A., Ohio State University; M.S.D., Indiana University.
- SEVERSON, Marlowe G., Assistant Professor of Physical Education, 1958-**
B.S., St. Cloud State College; M.A., University of Minnesota.
- SHERIDAN, James F., Associate Professor of Philosophy, 1962-**
B.A., Allegheny College; M.A., Pennsylvania State University; Ph.D., University of Illinois.
- SLOBETZ, Frank Ben, Professor of Psychology, 1949-**
B.S., Kansas State Teachers College, Pittsburg, Kansas; A.M., D.Ed., University of Missouri.
- SMITH, Lewis Conrad, Jr., Professor of English, 1949-51; 1952-**
B.A., M.A., Colorado State College of Education; Ph.D., State University of Iowa.
- STENNES, Ernest Korman, Assistant Professor of Mathematics, 1955-**
B.A., Concordia College, Moorhead; M.A., University of Wyoming.
- STOCK, William E., Instructor in Industrial Arts, 1962-**
B.A., M.A., State College of Iowa.
- SYBEN, Isolde, Assistant Professor of German, 1962-**
Ph.D., German University of Prague.
- TESSENDORF, Richard W., Instructor in Education, 1961-**
B.S., Bemidji State College; M.S., Mankato State College.
- THIELMAN, Edward**
B.S., St. Cloud State College.
- THOMPSON, Marvin Orville, Associate Professor of English, 1956-**
B.A., Macalester College; M.A., Ph.D., University of Minnesota.
- TIDEMAN, Philip L., Assistant Professor of Geography, 1957-**
B.A., University of Minnesota; B.S., St. Cloud State College; M.A., University of Nebraska.
- TRUMMEL, Donald R., Instructor in Physics, 1960-**
B.S., M.S., Western Illinois University.

*On leave of absence, 1962-63.

- VANDELL, Roland Arthur, Associate Professor of Mathematics, 1943-**
B.E., St. Cloud State College; M.A., University of Colorado; Ed.D., University of North Dakota.
- VAN NOSTRAND, Manning Eugene, Professor of Psychology and Philosophy, 1949-**
B.A., University of Rochester; B.D., Colgate-Rochester Divinity School, Rochester Divinity School, Rochester, N. Y.; Ph.D., Boston University.
- VAUGHTER, Paul H., Instructor in History, 1962-**
B.A., M.A., University of Tulsa.
- VOELKER, Francis H., Instructor in English, 1959-**
B.A., St. John's University, Collegeville; M.S., St. Cloud State College.
- *WALTON, Howard Ralph, Assistant Professor of Industrial Arts, Director, Bureau of Physical Resources, 1947-48; 1955-**
B.S., St. Cloud State College; M.A., University of Minnesota.
- WAUGH, Harvey Richard, Professor of Music, 1933-42; 1946-**
B.A., Grinnell College, Iowa; M.A., University of Iowa.
- WEISMANN, John Jacob, Instructor, Assistant Dean of Students, Director of Men's Affairs, 1927-**
B.A., St. Thomas College; M.S., University of Southern California.
- WHITE, Jack Martin, Assistant Professor, Administrative Assistant, 1961-**
A.B., Central Michigan University, Mount Pleasant, Michigan; M.A., Ed.D., University of Michigan.
- WHITE, Robert L., Instructor in Education, Curriculum Librarian, 1962-**
B.A., M.S., Southern Illinois University.
- WHITFORD, Audra Elizabeth, Assistant Professor of Business Education, 1943-**
B.S., University of Wisconsin; M.A., University of Iowa.
- WICK, Robert Hobbie, Professor, Dean, School of Science, Literature, Arts, 1948-**
B.A., Iowa State Teachers College; M.A., University of Southern California; Ph.D., University of Iowa.
- WILLIAMS, Virginia Genevieve, Assistant Professor of Business Education, 1952-**
B.S., Oklahoma College for Women; M.A., Denver University; Ed.S., George Peabody College for Teachers.
- WINK, Jack Stanley, Instructor in Physical Education, 1956-**
B.S., M.S., University of Wisconsin.
- WOLVERTON, Byron A., Assistant Professor of Music, 1962-**
B.Mus., M.A., University of Missouri.
- WOOD, Willis John, Instructor in Physical Education, 1958-**
B.A., University of Minnesota.
- WOODS, John B., Assistant Professor of Physical Education, 1962-**
B.S., Bemidji State College; M.S., Washington State University.
- WORTHINGTON, Martha Garrett, Professor of Foreign Languages, 1956-**
B.A., M.A., Louisiana State University; Ph.D., Tulane University.
- YOOS, George, Assistant Professor of Philosophy, 1962-**
B.A., M.A., University of Missouri.
- YOUNGNER, Philip G., Professor of Physics, 1949-**
B.S., St. Cloud State College; M.S., Ph.D., University of Wisconsin.
- ZAESKE, Arnold Henry, Associate Professor of Elementary Education, 1956-**
B.A., Elmhurst College; A.M., University of Illinois; M.Ed., Ed.D., University of Missouri.

*On leave of absence, 1962-63.

PART-TIME FACULTY—FALL QUARTER 1962

ASFELD, Nina, Audio-Visual and Library

BARKER, Mrs. Dorothy, Biology

BEHR, Philip, Geography

CAIRNS, Mrs. Betty, Student Loans

CHIRHART, Mrs. Virginia, TV Assistant
DETRA, Mrs. Elinor, Speech and Theatre
GRETHER, Mrs. Mary Ann, Nurse
GRACHEK, Arthur, Program Adviser
HANN, Mary Arlynn, Art
HEMBERGER, Richard, Industrial Arts
JOHNSON, Edward, Audio-Visual and Library
JOHNSON, Stephen, Health and Physical Education
KRAEMER, Urban, Audio-Visual and Library
KRAMER, John, Program Adviser
MILLER, Richard, Health and Physical Education
MORGAN, Ruth, Program Adviser
NELSON, Mrs. Gladys, Biology
NETZER, Mrs. Bernadette, English
NIGG, Lloyd, Program Adviser
POTUZAK, Lumir, Industrial Arts
STADLEY, Gilbert, Sociology
SVELA, Barbara, Program Adviser
TAYLOR, Robert, Program Adviser

FACULTY SENATE

1962-1963

Chairman — Ronald Riggs

Vice-Chairman — Robert Brown

(15) Representatives at Large:

1963 Irvamae Applegate
 1963 Lyle Ball
 1963 Harry Goehring
 1963 Paul Ingwell
 1963 A. H. Schelske
 1964 Harold Lieberman
 1964 Marvin Thompson
 1964 M. E. Van Nostrand
 1964 Marjorie Morse
 1964 H. A. Clugston
 1965 Charles Emery
 1965 Arthur Housman
 1965 Ronald Riggs
 1965 Robert Wick
 1965 John Laakso

(18) Division Representatives:

1963 Lorene Marvel
 1964 Guido Detra
 1963 Audra Whitford
 1964 James Marmas
 1963 Richard Nash
 1964 Victor Lohmann
 1963 Frances Bleick
 1964 George Serdula
 1963 Paul Cairns
 1964 William Donnelly
 1963 Rowland Anderson
 1964 Harold Hopkins
 1963 Arnold Zaeske
 1964 Donald Pollock
 1963 Claude Del Zoppo
 1964 Robert Brown
 1963 Luther Brown
 1964 Brendan McDonald

Ex-Officio:

President Budd
 Dean Balcer
 Dr. Zumwinkle

FACULTY COMMITTEES

STEERING COMMITTEE — Ronald Riggs (1963), Robert Brown (1963), H. A. Clugston (1963), Frances Bleick (1963), Robert Wick (1963).

FACULTY COUNCIL — L. Smith (1963), M. Thompson (1963), R. Gant (1963), H. Clugston (1964), G. Erickson (1964), F. Marlow (1964), J. Laakso (1965), G. Serdula (1965), L. Brown (1965). Budd, Balcer, McDonald, Zumwinkle.

CURRICULUM COMMITTEE — F. Bleick (1963), D. Pollock (1963), V. Williams (1963), H. Hopkins (1964), H. Krueger (1964), V. Mork (1964), P. Ingwell (1965), M. Michaelson (1965), A. Lease (1965). Budd, Balcer, McDonald.

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COMMITTEE ON STUDENT ACTIVITIES — M. Jones, R. Zumwinkle, F. Voelker (1963), R. Nash, W. Larson (1964), L. Hird, P. Tideman, F. Martin (1965), Budd and Balgaard.

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HEALTH SERVICE COMMITTEE — R. Zumwinkle, M. Conlin, G. Serdula, A. Brainard, J. Weismann, M. Jones.

COMMITTEE ON ADMISSIONS TO THE UNDERGRADUATE PROGRAM — F. Menninga (1963), F. Markwardt (1964), McDonald, C. Balcer, E. Thielman, R. Zumwinkle.

STUDENT PUBLICATIONS COMMITTEE — V. Mork (1963), R. Larson (1963), C. Crane (1964), E. Courter (1964), R. Rowland (1965), J. Goemer (1965), W. Donnelly, F. Bauries.

JUDICIAL COMMITTEE — 3 Years — Mary Scharf (1963), Rowland Anderson (1963), Ronald Riggs (1964), Guido Detra (1964), Floyd Gilbert (1965), Marvin Holmgren (1965).

STUDENT PROGRESS COMMITTEE — C. Balcer, A. Dale, H. Lohrman, G. Budd, R. Zumwinkle, J. Weismann, M. Jones, I. Applegate.

STUDENT SCHOLASTIC CONDUCT COMMITTEE — C. Balcer, R. Wick, I. Applegate, L. Ball, M. Severson, E. Campbell, President and Vice-President of Student Senate.

BUREAUS OF THE COLLEGE

BUREAU OF INFORMATION SERVICES — Ray Rowland, Director

This bureau is the official news agency for the college, disseminating information of general interest about the college, its students and its faculty to newspapers, radio and television stations and periodicals. In cooperation with Printing and Duplicating Services, it also produces certain official college publications and assists in the preparation of others.

BUREAU OF INSTRUCTIONAL RESOURCES — Luther Brown, Director

The major function of this bureau is providing the various areas of the College with Library (Main Library and Campus School Library), Audio-Visual, and Curriculum materials and services.

BUREAU OF PHYSICAL RESOURCES — Howard R. Walton, Director

The college campus contains about 350 acres of land, the larger areas consisting of islands in the Mississippi River, college woods, recreation fields, a granite quarry with its adjacent land, and the portion of land upon which the college buildings are located. The administration of the areas by the Bureau consists of developing all-around educational and recreational facilities and beautifications through the planting and under-planting of trees and shrubs, construction work, and maintenance of the areas. The Bureau aids in the construction and maintenance of the college buildings and adjacent grounds.

BUREAU OF RESEARCH — Marvin E. Holmgren, Director

The Bureau of Research has as its primary function the maintenance of a continuous self-survey of the college and of problems very closely related to this institu-

tion. These problems divide themselves into two classes: (1) Those which are quite distinctly related to college welfare, such as the functions of teacher colleges in a state, and (2) those which deal directly with student interests and welfare. Into this latter group belong such studies as summarizing the occupations of parents of students, determining the distribution of enrollment in cities and counties, and finding the number of students enrolled in the various curriculum programs of the college.

BUREAU OF SPECIAL SERVICES — Stanley D. Sahlstrom, Director

The bureau acts as a connecting link between the college and the public. Its purpose is to aid students by personal interviews with high school students and graduates, alumni, superintendents, teachers, and school officials; to assist graduates in their work; to supply speakers for public gatherings and for professional organizations from faculty and students.

BUREAU OF STUDENT PERSONNEL SERVICES

This bureau is maintained to promote the total development of the individual student. It supplements the services provided students through the academic program. The Offices of Dean of Students, Placement, Health Service, and Student Activities are a part of the bureau. Services rendered directly to college students by the Psychological Services Center are coordinated through the bureau.

RESIDENCE HALL DIRECTORS

Gerald D. Ferguson, Director of Student Housing

CAROL HALL — Mrs. Clare Ritchie

HILL HALL — Miss Alvina Bergstrom

LAWRENCE HALL — Mr. Thor Arnevik

MITCHELL HALL — Mrs. Alice Larsen

SHOEMAKER HALL — Mr. James Matchie, Mr. Clarence Hansen

WHITNEY HALL — Mrs. Alyn Dull

Auxiliary Director for Women's Halls — Mrs. Hollybelle Moriarty

BUILDINGS AND GROUNDS

Headley Hall. Constructed in 1961-62, this two-story structure houses facilities for teaching art, industrial arts and industrial technology. On the first floor are industrial arts shops, lecture rooms, a research laboratory and offices. The second floor includes conference rooms, a large lecture hall, an art studio, a gallery, workrooms and offices. The building is named for John W. Headley, president of the college from 1947 through 1951.

Brown Hall. Constructed in 1958-59, this three-story building houses facilities for teaching mathematics, biology, chemistry, geology, and physics. The first floor is devoted to mathematics, botany, and geology; the second floor to zoology; and the third to chemistry and physics. A science museum, herbarium, animal room, and a small library are found on the second floor. An auditorium with a seating capacity of 250 is attached to the north side of the main building by a corridor. A greenhouse is located on the south side. The building is named for the college's ninth president, J. C. Brown, who served from 1916 to 1927.

Gray Campus Laboratory School. This elementary and junior high school provides a program of education for approximately 300 children in 11 classroom units — kindergarten through grade nine, plus one unit of special education for cerebral palsied children. The school has an excellent children's library, music service center, 200-seat auditorium, gymnasium and allied arts area. College students preparing to teach use the facilities of the school to gain professional laboratory experiences, including observation of teaching-learning situations, some participation, student teaching and child study. The building is named for Thomas J. Gray, who was president of the college from 1881 to 1890.

Mitchell Hall. This is the largest residence hall for women on the campus, hous-

ing 420 students. It is located on the west bank of the Mississippi, two blocks north of Stewart Hall. Facilities include a main lounge, laundry room, and snack bar. The building was named for W. B. Mitchell, a former resident director of the college.

Riverview Building. Facilities for teaching speech, english, and foreign languages are provided in this building, including a language laboratory and an audio-visual room.

Kiehle Library, the main college library, combines beauty, utility, and comfort in making maximum use of its location alongside the Mississippi. This building houses all the instructional resources on the campus except for the Gray Campus Laboratory School library. These resources include the audio-visual service, curriculum materials and the holdings of the two libraries. Special features of the building are classrooms for library science, children's literature, high school literature, and special classes; recreational reading and study areas; conference and small study rooms; listening rooms; curriculum materials area; screened outdoor reading room; and well-equipped audio-visual classrooms, photographic darkroom and service section. The building is named for David L. Kiehle, second president of the college.

Stewart Hall. This building has been the center of college activities since its completion in 1948. The spacious three-story structure contains some 200 classrooms and offices, plus lounges, a bookstore, and an auditorium seating 1,200. The building was named for Warren H. Stewart, St. Cloud attorney who was resident director for the college from 1938 to 1948.

Eastman Hall. The health, physical education and recreation building has one large gymnasium with seating space for 1,500, two smaller gymnasiums, a swimming pool, dressing rooms, classrooms and offices. It is named for Alvah Eastman, a former resident director for the college.

Music Studio. This small building, south of Eastman Hall, is used for individual lessons in voice, piano, and violin. Practice rooms are provided for vocal and instrumental students.

B. Building. This two-story structure is being used temporarily to house the Psychological Services Center. It is located east of Riverview Building.

Lawrence Hall. This red brick residence hall, accommodating 130 students, is located alongside the Mississippi between Stewart Hall and Kiehle Library. It is named for Isabel Lawrence, who served as president of the college from 1914 to 1916.

Shoemaker Hall. This building is the largest residence hall for men on the campus. A modern split level addition and the original structure to which it is attached accommodate some 520 students. Located on a long sloping hill overlooking the Mississippi, the building is both attractive and functional.

Hill Hall. Completed in 1962, this 200-bed women's residence hall is the first unit in a proposed residence hall complex housing 1,600 students. It is named for Helen Hill, a member of the college faculty for 37 years.

Carol Hall. Originally a distinguished private residence, Carol Hall has served as a women's dormitory since 1936.

Whitney Home. This brick building, formerly a private residence, was acquired by the college in 1955. The purchase was made possible by a substantial gift by the heirs of Mrs. A. G. Whitney.

Food Service Building. Completed in 1963, this building features the latest in food preparation and group dining facilities. It provides meals for commuting students and on-campus women students.

Museum. The science museum in Brown Hall contains several interesting collections. Included are a collection of mammals, birds, butterflies and insects, a collection of rocks, minerals, and fossils and a herbarium with several hundred plant specimens.

Selke Field. The varsity athletic field, Selke Field, is located east of the main campus across the Mississippi. Its 18 acres, enclosed by a granite wall, include a baseball diamond, cinder track and football field. The grandstand seats 3,000 spectators. The field was named for George A. Selke, president of the college from 1927 to 1943.

Talahi Lodge. A half mile south of the main campus on a high terrace overlooking the Mississippi is Talahi Lodge, a rustic log building which is a popular

place for small meetings and parties. The lodge has a spacious living room, a fireplace and kitchen facilities.

George W. Friedrich Park. This 130-acre tract one mile east of the campus includes several granite quarry ponds and extensive pine plantings. The area around the quarries is now used for swimming, fishing and picnicking. The wilder parts of the area are used for nature study, conservation education and biological research.

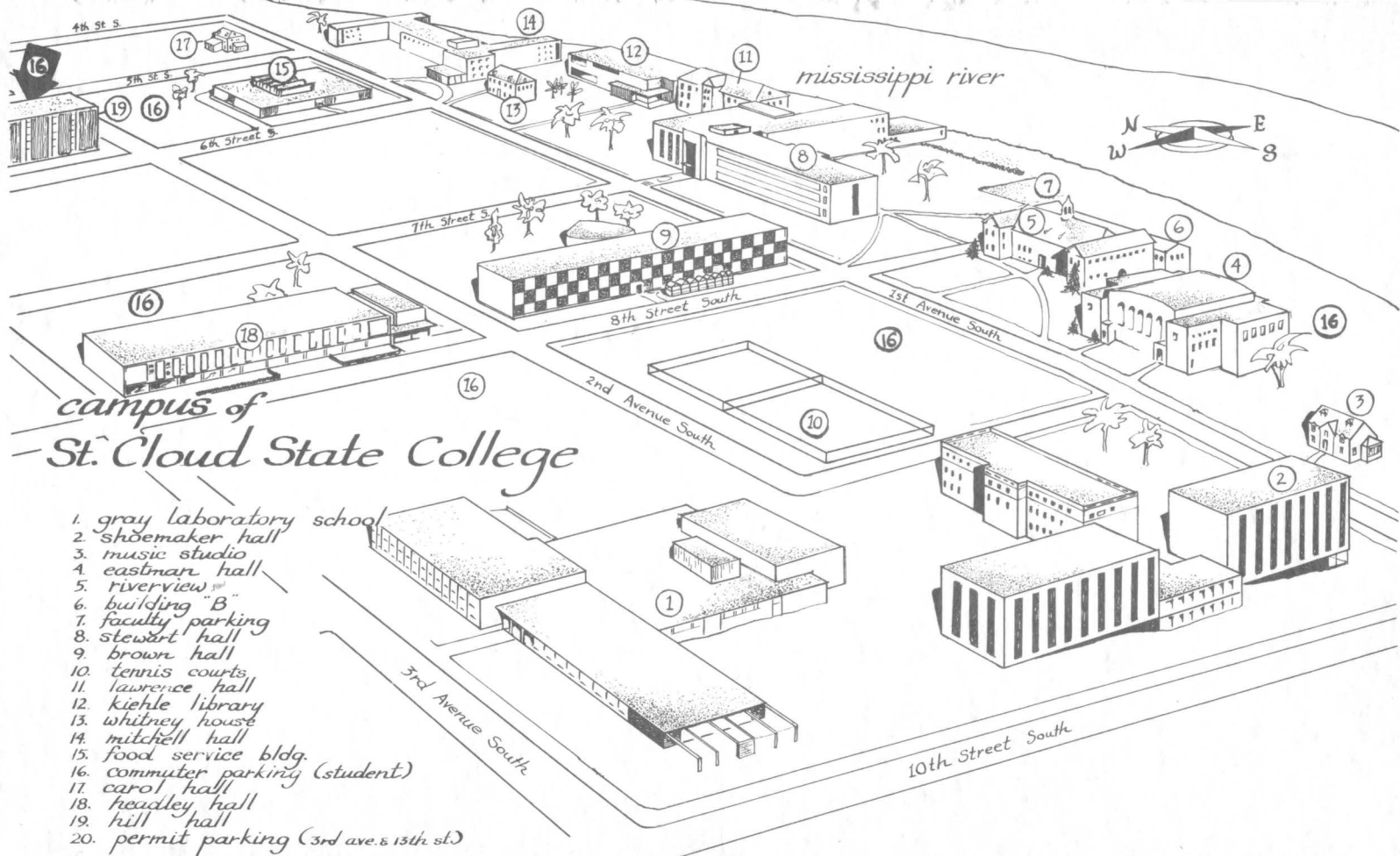
The Beaver Islands. The college owns an extensive group of islands in the Mississippi River one-half mile south of the campus. This unique group of islands was named by Zebulon Pike who explored this region in 1805, and has since figured in the history of steamboat travel and in the logging era. The islands now form a valuable outdoor laboratory for the study of plant and animal life in a relatively undisturbed natural area.

Natural Areas. On several of the college owned lands certain areas have been designated as natural areas, that is, living museums of primeval America to be retained in their natural condition. Such areas are of tremendous scientific and esthetic value. The upper river terrace at Talahi is being preserved as an oak savannah. The Friedrich Park area contains a diversity of pine, oak, prairie, marsh and bog types. The Beaver Islands are excellent examples of flood plain and low-land hardwoods forest types. Few schools in the nation have comparable facilities available.

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ST. CLOUD

STATE COLLEGE

SUPPLEMENT TO THE

• **GENERAL BULLETIN**

• **GRADUATE BULLETIN**

1963

65

ACADEMIC INFORMATION

ADMISSION AND REGISTRATION

ADMISSION OF HIGH SCHOOL STUDENT, page 10, NEW

Any student from an accredited high school in Minnesota who applies for admission for a fall quarter and who ranks in the 25th percentile or lower of his high school graduation class and who has a composite score of 15 or lower in the A.C.T. Battery will be given DEFERRED ADMISSION until the winter quarter of that school year. Students who rank in the 25th percentile or below in their graduating class and who fail to take the A.C.T. Battery and therefore have no composite score available will be deferred until the winter quarter.

ADMISSION OF TRANSFER STUDENTS, page 10, NEW

Any student who applies for admission to the college who has completed advanced standing transfer from another higher education institution who has less than a 2.0 ("C") average at the last college attended will be given deferred admission until the winter quarter of that school year.

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ACADEMIC POLICIES

CLASS ATTENDANCE, page 14, NEW

The College regards class attendance as the personal responsibility of each student. Upon enrollment in a course the student becomes responsible for all requirements in the course. It is the student's responsibility to give his instructor a possible in advance the reason for his absence. Members of the faculty will report to the Student Personnel Office the name of any student whose repeated absence is impairing his work.

REPEATING COURSES, page 14, ADD

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ACADEMIC INFORMATION

ADMISSION AND REGISTRATION

ADMISSION OF HIGH SCHOOL STUDENT, page 10, NEW

Any graduate from an accredited high school in Minnesota who applies for admission for a fall quarter and who ranks in the 37th percentile or lower of his high school graduation class and who has a composite score of 15 or lower in the A.C.T. Battery will be given DEFERRED ADMISSION until the winter quarter of that school year. (Students who rank at the 37th percentile or below in their graduating class and who fail to take the A.C.T. Battery and therefore have no composite score available will be deferred until the winter quarter.)

ADMISSION OF TRANSFER STUDENTS, page 10, NEW

Any student who applies for admission with advanced standing (transfer from another higher education institution) and who has less than a 2.0 ("C") average at the last college attended, will be given deferred admission until the winter quarter of that school year.

TIME OF ENTRANCE, page 11, NEW

Students must make application by the deadline indicated or their application will be evaluated for admission the following quarter. Deadlines for the 1964-1965 school year quarters are: Fall Quarter 1964: Friday, August 14, 1964; Winter Quarter 1965: Friday, December 11, 1964; Spring Quarter 1965, Friday, March 12, 1965.

SCHOLARSHIP STANDARDS

COMPUTING HONOR POINT RATIO, page 12, ADD

A student's honor point ratio is figured only on work taken at St. Cloud State College. Transfer credits carry no honor points.

ACADEMIC DEFICIENCIES AND SELECTIVE RETENTION, page 12, ADD

Any student who, after one quarter at St. Cloud State College, has less than a 1.00 honor point ratio will automatically be "on trial" his second quarter.

ACADEMIC POLICIES

CLASS ATTENDANCE, page 13, New

The College regards class attendance as the personal responsibility of each student. Upon enrollment in a course the student becomes accountable for all the requirements of the course. It is the practice for the student to give his instructor, if possible in advance, the reason for his absence. Members of the faculty will report to the Student Personnel Office the name of any student whose repeated absence is impairing his work.

REPEATING COURSES, page 13, ADD

A student will normally be allowed to repeat a course once if his original grade was D or E. However, a person with an over-all "C" average (2.0) may be granted special permission to repeat a course a second time by the Academic Dean upon special application by the student with a recommendation of the student's adviser and the Dean of the appropriate school.

CHANGE OF CLASS, page 13

Delete "approval of the instructor" from change of class procedure.

BACHELOR OF ARTS DEGREES

page 26-27, Change:

The hours required for the major-minor and/or foreign language will be no less than 60 hours. This may be accomplished by an inter-departmental major of no less than 60 hours, a major of no less than 48 hours and a foreign language, a major no less than 36 hours and a minor of no less than 24 hours.

No less than 60 percent of the credits in the major shall be at the 300-400 level. No less than 50 percent of the credits in the minor shall be at the 300-400 level.

BACHELOR OF SCIENCE DEGREE IN TEACHER EDUCATION

Secondary Education, page 26, Change

3. A major field of study of 48 quarter hours and a minor field of 36 quarter hours (or a minor of 24 in a foreign language).

PREPROFESSIONAL AND ASSOCIATE IN ARTS

Drop the Pre-Business and Pre-Medical Technology Programs

All students in the Preprofessional and Associate in Arts programs are required to take Orientation 021.

COST OF ATTENDANCE

TUITION

Following is the schedule of tuition charges for the Minnesota State Colleges:

ON CAMPUS COURSES

Fall, Winter, or Spring Quarters

Undergraduate:

Residents	\$4.25 per credit hour
Non-residents	\$6.50 per credit hour

Graduate:

Residents	\$6.00 per credit hour
Non-residents	\$8.50 per credit hour

Summer Sessions:

Undergraduate:

Residents	\$5.50 per credit hour
Non-residents	\$6.50 per credit hour

Graduate:

Residents	\$6.00 per credit hour
Non-residents	\$8.50 per credit hour

OFF CAMPUS COURSES:

All students—graduate or undergraduate, resident or non-resident, regular school year or summer sessions \$8.00 per credit hour

Minimum tuition of any credit-granting course of instruction \$15.00

GRADUATE STUDIES

The following changes have been made in the 1963-65 GRADUATE BULLETIN:

- p. 17: Substitute the following paragraph for the first paragraph in the section entitled "Credits Transferable":
 St. Cloud State College will allow the transfer of 9 quarter hours of graduate work satisfactorily completed at other colleges and universities and/or extension credit earned at this college. No more than 9 credits earned by tours or field trips may be counted toward completion of the Master's degree.
- p. 21: Substitute the following paragraph for the first paragraph in the section entitled "Standard of Scholarship":
 Candidates for the Master's degree must maintain a "B" average in both the major and the total program. Courses in which a mark below "C" was earned will not be accepted for graduate credit, but the honor point deficiency must be made up through graduate work taken at this college.
- p. 21: See corrected "Fees" schedule shown in this supplement.
- p. 24: Substitute the following statements for 2-b(1) and 2-b(2) under Plan B:
 2-b. He must have earned a minimum of 9 quarter hours in the Professional Core, distributed as follows:
 1.) Required: Psy. 578 STATISTICAL METHODS IN EDUCATION AND PSYCHOLOGY, 3 credits, or an equivalent graduate-level statistics course.
 2.) Elect at least two of the following courses: (If an equivalent graduate-level statistics course has been substituted for Psy. 578, the student must elect at least three of the following courses:
- pp. 31-46: In all programs, substitute the following statement for that given under "Related Fields," this change to become effective Fall Quarter 1964:
 General Studies (minimum: 9 credits)
 A minimum of six credits must be taken in courses listed in a "General Studies Core." Information about this core can be obtained from the Graduate Studies office.
 The three other credits may be taken in the "General Studies Core," or they may be taken in coursework outside the major field and Professional Education.
- p. 31: Substitute the following outline of course requirements in the "Program for Elementary School Teachers" for that given in items I through V in the published program:

PLAN A

- I. Major in Elementary Education (Minimum: 24 credits)
- A. Prescribed:
 1. Master's Thesis, 3 to 6 credits
 2. Ed. 560: Elementary School Curriculum, 3 credits
 - B. Electives: A minimum of 9 to 12 credits must be earned in courses related to teaching in the elementary school.
 - C. Other Professional Education: A minimum of 3 credits each must be earned in 2 of the following 4 areas:
 1. Ed. 569: Philosophy of Education, 3 credits or Ed. 559: Problems in American Education, 3 credits
 2. Psy. 563: Theories of Learning, 3 credits or Psy. 571: Mental Hygiene, 3 credits
 3. Ed. 550: School Law, 3 credits
 4. Ed. 571: Education of Exceptional Children, 3 credits

- II. Psy. 578: Statistical Methods in Education & Psychology, 3 credits
- III. Ed. 515: Introduction to Research, 3 credits
- IV. General Studies: A minimum of 15 credits must be earned in fields other than Professional Education.

PLAN B

- I. Major in Elementary Education (Minimum: 24 credits)
 - A. Prescribed: Ed. 560: Elementary School Curriculum, 3 credits
 - B. Electives: A minimum of 15 credits must be earned in courses related to teaching in the elementary school.
 - C. Other Professional Education: A minimum of 3 credits each must be earned in 2 of the following 4 areas:
 - 1. Ed. 569: Philosophy of Education, 3 credits or Ed. 559: Problems in American Education, 3 credits
 - 2. Psy. 563: Theories of Learning, 3 credits or Psy. 571: Mental Hygiene, 3 credits
 - 3. Ed. 550: School Law, 3 credits
 - 4. Ed. 571: Introduction to Exceptional Children, 3 credits
- II. Psy. 578: Statistical Methods in Education & Psychology, 3 credits
- III. Ed. 515: Introduction to Research, 3 credits
- IV. General Studies: A minimum of 15 credits must be earned in fields other than Professional Education.
- V. Elective: 3 credits, minimum.

pp. 42-43: Substitute the following "Program for Special Education Personnel" for the "Program for Teachers of the Mentally Retarded":

PROGRAM FOR SPECIAL EDUCATION PERSONNEL:

Before a student will be permitted to enroll in the program, he must be eligible for a Minnesota Teacher's Certificate. One years teaching experience is considered desirable for admission to this program.

Both Plan A and Plan B are available to students who enroll in this program. Plan A is designed primarily for those students who have obtained a teaching endorsement in special education who desire advanced work. For those who are working toward certification, Plan B is recommended.

PLAN A

- I. Prescribed courses in Special Education (Minimum: 24 credits).
 - A. 15 to 21 credits in special education selected in conference with adviser.
 - B. Master's Thesis, 3 to 9 credits.
- II. Professional Core (Minimum: 9 credits)
 - A. Prescribed:
 - Psy. 578 Statistical Methods in Education and Psychology, 3 credits
 - B. The student will complete Professional Core requirements by taking two of the following courses:
 - Ed. 559: Problems in American Education, 3 credits
 - Ed. 560: Elementary School Curriculum, 3 credits or Ed. 561: Secondary School Curriculum, 3 credits
 - Ed. 567: Human Relations, 3 credits
 - Ed. 569: Philosophy of Education, 3 credits
 - Psy. 563: Theories of Learning, 3 credits
- III. Introduction to Research (Ed. 515: 3 credits)
- IV. General Studies (minimum: 9 credits)

PLAN B

- I. Courses in Special Education (Minimum: 24 credits)
 - A. Prescribed:
 - Ed. 571: Introduction to Exceptional Children, 3 credits
 - Ed. 583: Education of the Mentally Retarded, 3 credits
 - Psy. 573: Psychology of Mental Retardation, 3 credits
 - Ed. 584: Problems in Special Education, 3 credits
 - B. Elect 12 credits in Special Education with approval of adviser.

II. Professional Core (Minimum: 9 credits)

A. Prescribed:

Psy. 578: Statistical Methods in Education and Psychology, 3 credits

B. The student will complete Professional Core requirements by taking two of the following courses:

Ed. 559 Problems in American Education, 3 credits

Ed. 560: Elementary School Curriculum, 3 credits or Ed. 561:

Secondary School Curriculum, 3 credits

Ed. 567: Human Relations, 3 credits

Ed. 569: Philosophy of Education, 3 credits

Psy. 563: Theories of Learning, 3 credits

III. Introduction to Research (Ed. 515, 3 credits)

IV. General Studies (minimum: 9 credits)

V. Electives: 3 credits, minimum

SCHOOL OF BUSINESS AND INDUSTRY

Add the following new departments:

Department of Accounting

Department of Industrial Engineering and Technology

BUSINESS ADMINISTRATION

COURSE DESCRIPTIONS

Add the following:

438-538 Law and Society. Resolving disputes, maintaining historical continuity, protecting voluntary arrangements and alleviating acute social conflict. Cases from criminal, tort law and the law of domestic relations. 4 credits.

442 Corporate Financial Policies. Financial practices and management of the modern corporation; effects of corporate decisions on our economic system. Prerequisite: Bus. Ad. 440. 4 credits.

443 Investment Principles. Stock market organization and operation. Interpretation of financial statements, operations of brokers, and analysis of stock. Prerequisite: Bus. Ad. 243. 4 credits.

452 Life, Accident, and Sickness Insurance. Risk management applied to personal and personnel risks. Life and health contracts, group life insurance, pension plans, programming, estate planning and business insurance. 4 credits.

454 Property and Liability Insurance. Risk management applied to insurable property and liability risks. Contracts; essentials of insurance law; rates and reserves; insurance surveys, types of property and liability insurances; optimum insurance programs. 4 credits.

456 Real Estate Finance. Valuation of real estate. Methods employed in real estate financing, sources and use of funds, land development, zoning, housing, and rent control as they affect real estate values. 4 credits.

458 Real Estate Law. Brokerage, agreements of sale, security arrangements, transfer of title and settlement are examined for their legal aspects. Special problems of zoning, easements and restrictive covenants. 4 credits.

Change the following:

301 Change number to:

435-535 Business Law. Basic legal principles in contracts and negotiable instruments. 4 credits.

- 302 Change number to:**
436-536 Business Law. Bailments, common carriers, sales, partnerships, and corporations. 4 credits.
- 461 Change number to:**
461-561 Small Business Management. Analysis of management problems and responsibilities in organizing, financing, and operating a small business. 4 credits.
- 462 Change number to:**
462-562 Industrial Purchasing. Fundamental information regarding procurement principles, procedures, and methods. Planning, systemization, management, research, and analysis. 4 credits.
- 463 Change number to:**
463-563 Time and Motion, Work Simplification. Principles and practices, including motions economy, operation, and analysis, methods, micro-motion study, stop-watch time study; analysis and synthesis of data and formula construction. 4 credits.
- 464 Change number to:**
464-564 Collective Bargaining. Company and union positions in the bargaining process. Gathering, analyzing, and formulating plans; evaluating and revising contracts, costs and administration of labor agreements. 4 credits.
- 479 Change number to:**
479-579 C.P.A. Review. Review of the areas stressed in C.P.A. exam; Auditing, Law, Theory, and Accounting problems (cost, tax, government, consolidations, partnerships, cash flow). Prerequisite: 24 credits in Accounting or consent of department. 4 credits.
- 480 Change number to:**
480-580 Accounting Systems. Internal control in accounts receivable, accounts payable, cash receipts, cash payments, purchases, sales, and payroll; methods of data processing. 4 credits.
- 550 Change to correct number: 540.**

BUSINESS EDUCATION AND OFFICE ADMINISTRATION

Add the Following Statement:

The Master of Science degree program in business education provides students with the opportunity to develop their professional ability and increase their knowledge and understanding in the field of business.

Replace present programs with the following:

BACHELOR OF SCIENCE IN BUSINESS EDUCATION

Core Requirements (46)

- BusEd 103 Typewriting (3)
 BusEd 107 Machine Calculation (1)
 BusAd 131 Introduction to Business (4)
 BusAd 241-242-243 Principles of Accounting (12)
 BusEd 300 Survey of Business Law (4)
 BusEd 316 Business Communication (4)
 BusEd 351 Methods in Book-keeping (2)
 BusEd 352 Methods in Typewriting and Related Subjects (2)
 BusEd 354 Methods in Basic Business Subjects (2)
 BusEd 446 Consumer Education (4)
 Econ 272 Principles of Economics (5)
 Econ 372 Modern Economic Problems (3)

For the 84-hour major select from the following options:

- Secretarial and Basic Business
 Secretarial and Accounting
 Accounting and Distributive Education
 Basic Business and Accounting
 Basic Business and Distributive Education

For the 60-hour major select from the following options:

- Basic Business
 Accounting
 Secretarial (22)
 (Student without high school shorthand)
 BusEd 108 Records Management (2)
 BusEd 211-212-213 Shorthand (12)
 BusEd 203 Transcription (2)
 BusEd 274 Advanced Machine Calculation (2)
 BusEd 275 Duplicating Machines (2)
 BusEd 353 Methods in Shorthand (2)

(Student with high school short-hand) (20)

BusEd 108 Records Management (2)

BusEd 274 Advanced Machine Calculation (2)

BusEd 275 Duplicating Machines (2)

BusEd 353 Methods in Shorthand (2)

Select 12 quarter hours from the following:

BusEd 221; 222; 223; 321; 322; 323; 326 (12)

Accounting (14)

BusEd 274 Advanced Machine Calculation (2)

BusAd 475 Intermediate Accounting (4)

BusAd 476 Intermediate Accounting (4)

BusAd 477 Advanced Accounting (4)

Basic Business (14)

BusAd 302 Business Law (4)

BusAd 440 Business Finance or Econ 471 Money and Banking (4)

BusAd 444 Principles of Insurance or BusAd 427 Real Estate Fundamentals (4)

Econ 379 Comparative Economics Systems (2)

Distributive Education (22)

BusEd 355 Methods in Distributive Education (2)

BusAd 220 Principles of Marketing (4)

BusAd 420 Principles of Retailing (4)

BusAd 422 Principles of Advertising (4)

BusAd 423 Salesmanship (4)

Select four quarter hours from the following:

BusAd 416; 421; 424; 427; or 431 (4)

Related electives depending upon options selected—0 to 10 hrs.

COURSE DESCRIPTIONS

Add the following:

355 Methods in Distributive Education. Subject matter, methods, and evaluative procedures for teaching the distributive subjects. Required before student teaching. 2 credits.

Change the following:

108 Change title and description to: Records Management. Common systems and filing practices; study of records, organization, management, and control. 2 credits.

300 Change credits to 4.

354 Change title to: Methods of Basic Business Subjects.

599 Change title and credits to: Master's Thesis in Business Education. 3-9 credits

Drop the following:

206

INDUSTRIAL ARTS

Add the following program:

MINOR FOR ELEMENTARY MAJORS

Required (22)

110 Technical Drawing I (3)

130 Wood Technology (3)

210 Construction and Upholstering (2)

240 Metal Technology (3)

260 Industrial Materials (2)

270 Basic Electricity (3)

324 Graphic Arts (3)

360 Industrial Process (3)

Elective (2) Elect one from the following

111 Technical Drawing II (2)

160 Industrial Finishes and Adhesives (2)

161 Industrial Crafts (3)

211 Industrial Design and Illustrating (3)

251 Technical Mathematics (3)

COURSE DESCRIPTIONS

Add the following:

452-552 Shop Planning, Equipment and Maintenance.

471-571 Electronics IV.

472-572 Electronics V.

Change the following:

292 Change title to: Modern Technology and Civilization.

INDUSTRIAL ENGINEERING AND TECHNOLOGY

Drop the following:

Delete Political Science 380, Public Administration, from the Bachelor of Arts program in Industrial Technology. In its place add: Business 410, Personnel Administration.

SCHOOL OF EDUCATION

Add the following new department:

Department of Library Science and Audio-Visual Education

EDUCATION

COURSE DESCRIPTIONS

Add the following:

- 414-514 Interpretation of Research.** Documentation and bibliography; kinds of research and research methods, use and interpretation of basic statistical tools and procedures. 3 credits.
- 485 Junior Practicum in Special Education.** Laboratory experience for four hours per week in special classes in the public schools and campus laboratory school. Open only to juniors and seniors considering certification in special education. Prerequisite: Educ. 471. 2 credits.
- 511 Preparation of Instructional Materials.** Planning and preparing materials for instructional use; use of audio-visual equipment. Laboratory. 3 credits.
- 515 Introduction to Research.** Evaluating research procedures and interpreting findings. Defining and delimiting a problem, efficient gatherings and proper documentation of data, organization and presentation of findings in acceptable form. 3 credits.
- 551 Improvement of Instruction in Elementary Language Arts.** Activities and procedures for improving instruction in the language arts. Analysis and evaluation of literature, research findings, and curriculum materials in the language arts curriculum. 3 credits.
- 552 Improvement of Instruction in Elementary Science.** Activities and procedures for improving instruction in science instruction. Analysis and evaluation of literature, research findings, and curriculum materials in the science curriculum. 3 credits.
- 553 Improvement of Instruction in Elementary Social Studies.** Activities and procedures for improving instruction in the social studies. Analysis and evaluation of literature, research findings, and curriculum materials in the social studies curriculum. 3 credits.
- 554 Improvement of Instruction in Elementary Arithmetic.** Activities and procedures for improving instruction in arithmetic instruction. Analysis and evaluation of literature, research findings, and curriculum materials in the arithmetic curriculum. 3 credits.
- 555 Modern Trends and Practices in Elementary Education.** Problems, conditions, and issues relating to elementary education. Analysis and study of contemporary trends and practices in organization, curriculum, materials, evaluation and reporting procedures, and articulation. 3 credits.
- 556 Diagnostic and Remedial Teaching.** Diagnostic and remedial techniques used in teaching reading, spelling, handwriting, fundamentals of English, and arithmetic. 3 credits.
- 558 Recent Trends in the Teaching of Reading.** Teaching techniques and procedures most effective at the present time. Current reading and research materials and reading programs based on the needs, interest, and ability of children. 3 credits.
- 562 Improvement of Kindergarten, Primary Education.** Activities and procedures to improve the teaching and use of materials in kindergarten and primary program. 3 credits.
- 579 Unit Teaching in Elementary School.** Philosophy underlying unit teaching, practical suggestions for planning, organizing, and developing a unit of work with children. Relation of unit teaching to total school program. 3 credits.
- 585 Recent Research in Mental Retardation.** Trends, implications for planning educational programs for mentally retarded, emphasis on studies in psychology and education. Prerequisites: Education 483 and Psychology 473. 3 credits.

586 Supervision of Special Education. Methods, problems of staffing, curriculum development, administrative relationships. Prerequisite: a course in supervision. 3 credits.

Change the following:

447 Add to the description: Prerequisite: Psy. 362. To be taken the quarter immediately preceding student teaching; and Psy. 362 immediately preceding Educ. 447.

457 Add to the description: Prerequisite: Psy. 362. To be taken the quarter immediately preceding student teaching; and Psy. 362 immediately preceding Educ. 457.

469 Change to:

469-569 Administration of Audio-Visual Programs. Organization and management of audio-visual programs in schools. Prerequisite: Education 468. 3 credits.

SPECIAL EDUCATION

Refer to Graduate Study section for graduate programs in this area.

Change introductory statement on page 50 (General Bulletin) to:

Mentally Retarded

Qualification in this field includes all of the requirements listed for the Bachelor of Science in Elementary Education and the following:

Educ. 471 Introduction to Exceptional Children (4)

Psy. 473 Psychology of Mental Retardation (4)

Educ. 483 Education of Mentally Retarded (4)

Teaching 416 Teaching the Mentally Retarded – credits not applicable to minor.

Electives to be selected in conference with advisor to total 24 hours in the minor.

LIBRARY AND AUDIO-VISUAL EDUCATION

Luther Brown, Ph.D., Acting Chairman

Add the following statement:

The Library Science minor is available on the Bachelor of Arts program.

Change the following program:

Replace the minor listed in the current bulletin with the following:

275 Introduction to Librarianship (2) 475 Elementary School Library

375 Functions of the School Materials (3)

Library (4)

476 Secondary School Library

376 Selection of Library Materials (4) Materials (3)

377 Reference (4)

477 Practicum (2)

378 Technical Processes (4)

Add the following programs:

Audio Visual Coordinator

Elementary Majors Required

Ed 368 A-V Materials & Methods (3)

Ed 447 Secondary School I (4)

Ed 469 A-V Administration (2)

Eng 251 Children's Literature (4)

Elect four credits from the following:

Ed 312 Developmental Reading I (4)

Ed 369 Educational Photography (3)

Ed 370 Junior High School

Education (4)

(If not Jr. H. endorsement)

Ed 412 Developmental Reading II (4)

Ed 475 Improving Secondary School

Instruction (4)

Eng 353 Adolescent Literature (3)

(If not Language Arts major)

Secondary Majors Required

Ed 368 A-V Materials & Methods (3)

Ed 457 Elementary School I (4)

Ed 469 A-V Administration (2)

Elect four credits from the following:

Ed 417 Developmental Reading in
Junior & Senior High School (4)

Ed 351 Kindergarten-Primary
Education (4)

(If not Kindergarten endorsement)

Ed 369 Educational Photography (3)

Ed 370 Junior High School
Education (4)

(If not Jr. H.S. endorsement)

Eng 251-Children's Literature (4)

Eng 353 Adolescent Literature (3)
(If not Language Arts major)

COURSE DESCRIPTIONS

Replace all existing courses, with the exception of 478 and 479, with the following courses:

- 275 Introduction to Librarianship.** Introductory survey of the various facets of librarianship. 2 credits.
- 375 Functions of the School Library.** Objectives, methods, and evaluation of school library services, standards, annual reports, planning program, and budget, housing, staff, and circulation procedures. Prerequisite: 275. 4 credits.
- 376 Selection of Library Materials.** Theory, principles, and techniques of selection, introduction to the basic tools for selection of printed and non-printed materials. Prerequisite: 275. 4 credits.
- 377 Reference.** The theory and practice of reference work; study and evaluation of basic reference tools, and study of bibliographies in the various subject fields. Prerequisite: 275. 4 credits.
- 378 Technical Processes.** Organization of library materials for effective service to readers. Acquisition, classification, cataloging, preparation, and preservation of materials. Prerequisite: 275. 4 credits.
- 400 Special Problems in Library.** A seminar or conference course for advanced students wishing to work out a special problem in library science. 1-4 credits.
- 475 Elementary School Library Materials.** A study of the aids, methods, and criteria for the selection and use of instructional materials for students in the elementary school. Prerequisite: 275 & 376. 3 credits.
- 476 Secondary School Library Materials.** A study of the aids, methods, and criteria for the selection and use of instructional materials for students in the secondary school. Prerequisite: 275 & 376. 3 credits.
- 477 Practicum.** Supervised experience in a library, coordinating theory and practice. Prerequisite 275 & 378. 2 credits.
- 575 Organization and Use of Instructional Resources.** Integration of all forms of audio-visual and library materials encompassed in a single unit. Organization, use, and supervision of instructional resources. 3 credits.

STUDENT TEACHING

Change the following:

Teaching 414 Change description to show available for 4, 8 or 16 credits.

HEALTH, PHYSICAL EDUCATION, AND RECREATION COURSE DESCRIPTIONS

Add the following:

- 222 Beginning Bowling.** Basic techniques and knowledges. Student arranges his own transportation, equipment and lane fees. (M&W). 1 credit.
- 412-512 History of Physical Education.** Role of physical education in the life of primitive man and ancient societies on to the present. Impact of programs in foreign countries on the program of this country. 3 credits.
- 508 Principles and Philosophy of Physical Education.** Biological, sociological, and psychological interpretations of physical education. Philosophical concepts from Ancient Roman and Greek cultures to present. 3 credits.

Drop the following:

120, 127, 142, 143, 145, 146, 260, 332, 448-548, 505

PSYCHOLOGY

Change the following program requirements:

Psychology major (48) and Minor (36): Substitute Psy. 350 for Math. 330.

COURSE DESCRIPTIONS

Add the following:

- 350 Psychological Statistics.** Introduction to statistical methods and applications to psychological, educational, and related data; basic descriptive techniques with respect to central position, variability, and relationship. 4 credits.
- 570 Developmental Psychology.** Advanced course in human growth and development, emphasis on trends, problems, theoretical considerations, and contemporary research. 3 credits.

Change the following:

360 Change prerequisite to Psy. 350.

462 Change course number and description to: 362 Add to the description the statement, "To be taken not earlier than the quarter immediately preceding Educ 477 or Educ 457.

463 Change prerequisite to: Psy 362 and student teaching.

Drop the following:

581

SCHOOL OF SCIENCE, LITERATURE AND ARTS

ART

Comprehensive Art Major changed by the additions and deletions of the following courses:

Add Art 120 and 435.

Delete Art 236, 320, 332, 349, 378, 436.

Addition to the requirements:

Choose two of the following:

Art 236; Art 378; Art 239.

The number of electives changed from 7 to 12-13.

COURSE DESCRIPTIONS

Add the following:

120 Drawing I. Introductory experiences with varied drawing media. 2 credits.

433-533 Non-Western Art History. Non-western cultures including India, China, Japan, and Russia. 4 credits.

435 Printmaking I. Introduction to graphic processes. Prerequisite: 120 & 231. 3 credits.

439-539 Change title to History of American Art. Art of America from the Indian cultures through the United States of the pre-civil war period. 4 credits.

440-540 History of American Art. Painting, sculpture, architecture, prints, and crafts from the Civil War to present. 4 credits.

443 Watercolor Painting II. Prerequisite Art 343. 2 credits.

465 Ceramic Sculpture. Prerequisite Art 336 and 245. 3 credits.

Change the following:

220 Change title to Drawing II.

230 Change title to Introduction to Studio. 3 credits. Recommended for non-art majors.

231 Change title to Design I.

232 Change title to Design II.

233 Change title to Design III.

239 Change credits to 3.

320 Change title to Drawing III.

343 Change title to Watercolor I.

344 Change credits to 3-6 credits.

349 Change title to Graphic Design.

378 Change title to Jewelry and Enamelling and credits to 3.

436 Change title to Printmaking II.

437 Change title to Printmaking III.

460 Change title to Ceramics I.

461 Change title to Ceramics II.

544 Delete from description: "or commercial art. Prerequisite: Art 232 and Art 234 or equivalent."

562 Change description to begin: "Advanced work on the potter's wheel,"

BIOLOGY

Add the following:

BACHELOR OF ARTS PROGRAMS:

Major (60)

Zoology 241, 242 General Zoology (8)

Botany 245, 246 General Botany (8)

Zoology 243 Vertebrate Taxonomy or
Botany 247 Plant Taxonomy (4)

Electives: Biological Sciences (40)

Supporting courses: 24 credits to be
selected from chemistry, physics,
and/or mathematics.

Minor (36)

Electives from botany and zoology at
the 200 level: (16)

Electives from biological sciences at
300-400 level: (20)

Program changes:

Comprehensive Biology Major changes: Omit Math 224; omit Zoology 243; add
Biology 420; change electives to 27 credits.

Elementary Education minor changes: Add, or "Botany 247" after Botany 345;
add to list of electives, Zoology 242.

COURSE DESCRIPTION

Add the following:

420-520 Seminar. Lectures, readings, and discussion on selected topics. May be
repeated. 1 credit.

421-521 Laboratory Procedures. Techniques, skills, and practical experiences.
May be repeated once. 1 credit.

457-557 Methods and Materials for Teaching Biology. Modern approaches to
teaching of high school biology in classroom and laboratory, including
materials of Biological Sciences Curriculum Study. Laboratory. 2 credits.

477-577 Biology Institute. Selected topics in biology for experienced teachers
of science. Laboratory. 3-4 credits.

559 Organic Evolution. History, evidence, and processes of evolution. 2 credits.

439-539 General Parasitology Zoology. Animal parasites and their relation to
diseases of man and other animals. Laboratory. Prerequisite: Zoology 242.
4 credits.

Change the following:

247 Change prerequisite to Botany 245.

445-545 Change title and description to: **Molecular Biology.** Dynamic aspects
of cell structure and function at the molecular level. Laboratory. Pre-
requisite: Chemistry 221. 4 credits.

CHEMISTRY

Add the following:

BACHELOR OF ARTS PROGRAMS:

Major (60)

211, 212 General Inorganic
Chemistry (8)

223 Qualitative Analysis (4)

321, 322, 323 Organic Chemistry (12)

325 Quantitative Analysis (4)

422 Quantitative Analysis (4)

425, 426, 427 Physical Chemistry (12)

Electives (300 and 400 level
courses) (16)

Supporting Courses:

Math 241, 242, 243, Analysis I, II,
III (12)

Physics 231, 232, 233 College

Physics (12)

Foreign Language (12)

Minor (36)

211, 212 General Inorganic
Chemistry (8)

223 Qualitative Analysis (4)

321, 322 Organic Chemistry (8)

325 Quantitative Analysis (4)

425, 426, 427 Physical Chemistry (12)

Supporting Courses:

Math 241, 242, 243, Analysis I, II,
III (12)

Physics 231, 232, 233 College

Physics (12)

COURSE DESCRIPTIONS

Add the following:

- 412-512 Radiochemistry.** Physical aspects of radiation, its measurement and its chemical and biological effects. Nuclear decay and bombardment reactions. Chemical operations involving radioisotopes. Applications of radioisotopes to chemical and biochemical problems. Lecture. Prerequisite: Chem 221 or 223 and Phys 233. 2 credits.
- 413-513 Radiochemistry Laboratory.** Detection, characterization, and measurement of radiation; chemical operations and the application of radioisotopes to chemical and biochemical problems. Prerequisite: Chem 412-512. 2 credits.
- 458-558 Methods and Materials for Teaching Chemistry.** Modern approaches to teaching of high school chemistry in classroom and laboratory, including materials of Chemical Bond Approach Project and Chemical Education Materials Study. Laboratory. 2 credits.
- 477-577 Chemistry Institute.** Selected topics in chemistry for experienced teachers of science. Laboratory. 3-4 credits.

ECONOMICS

COURSE DESCRIPTIONS

Add the following:

- 273 Principles of Economics I.** Description and analysis of the economic process, nature of free enterprise system, national income, money and the banking process and other aspects of micro-economics. 4 credits.
- 274 Principles of Economics II.** Theory of income distribution, pricing process under different market situations, emphasis on micro-economics. 4 credits. Prerequisite to all Economics courses are Econ 273 and 274, except Econ 400-500 and 481-581.

Drop the following:

- 272 Principles.**

ENGLISH

Replace the present programs with the following:

Major (48)

- 331 Advanced Composition (2)
 333 The English Language (3)
 334 Grammars of English (3)
 343 Shakespeare I (3)
 401 Literary Theory and Criticism (3)
 452 Teaching of Language Arts in Secondary Schools (4)
 Any 1 of the following courses:
 430 Chaucer (3)
 435 History of the English Language (3)
 440 Milton (3)
 443 Shakespeare II (3)
 1 course each from any 5 English Literature groups (15)
 1 course each from any 3 American Literature groups (9)

Minor (36)

- 331 Advanced Composition (2)
 333 The English Language (3)
 343 Shakespeare I (3)
 452 Teaching of Language Arts in Secondary Schools (4)
 Any 1 of the following courses:
 343 Grammars of English (3)
 430 Chaucer (3)
 435 History of English Language (3)
 440 Milton (3)
 443 Shakespeare II (3)
 1 course each from any 4 English Literature groups (12)
 1 course each from any 2 American Literature groups (6)
 Elective in English (3)
Elementary Education Minor (36)
 331 Advanced Composition (2)
 333 The English Language (3)
 343 Shakespeare I (3)
 1 course each from any 4 English Literature groups (12)
 1 course each from any 2 American Literature groups (6)
 Elective in English (10)

Add the following:

BACHELOR OF ARTS PROGRAM:

The major for a Bachelor of Arts in English shall consist of 48 hours of English, minimum, with the courses to be selected with the guidance and approval of the major advisor. This major shall be accompanied with 12 hours in a foreign language at the 200 level or above.

COURSE DESCRIPTIONS

Add the following:

271 The Restoration. Dryden, Pepys, Butler, Wycherley, Congreve, and related authors. 3 credits.

275 The Romantics II. The younger generation: Byron, Shelley, Keats, Hunt, DeQuincey, and the minor poets, essayists, and periodical writers. 3 credits.

277 Victorian Prose Writers and Dramatists. Carlyle, Ruskin, Huxley, Arnold, and related authors, introduction to the drama and novel of the period. 3 credits.

385 The Eighteenth Century, 1750-1800. Gray, Cowper, Goldsmith, Sheridan, Burhs, and related authors. 3 credits.

402-502 History of Literary Theory and Criticism. Examination of major texts from ancient times to the present. Designed to provide the student with a background of critical history. 4 credits.

435 History of the English Language. Development of the language as reflected in the literature of the various periods. 3 credits.

442-542 American Novel. Critical and historical studies of the American novel. 4 credits.

461-561 American Writers Before 1860. Any two or three: Cooper, Poe, Hawthorne, Emerson, Thoreau, Longfellow, Whittier, Holmes, and others. 4 credits.

470-570 American Writers After 1860. Any two or three: Whitman, Twain, Crane, James, Howells, Faulkner, Fitzgerald, T. S. Eliot, Sinclair Lewis, and others. 4 credits.

471-571 Renaissance Drama Exclusive of Shakespeare. Representative Tudor and Jacobean dramatists: Kyd, Marlowe, Dekker, Jonson, Webster, Heywood, and related authors. 4 credits.

476-576 English Writers of the Nineteenth Century. Writings, background, and criticism of one or more of the principal writers of the 19th Century, such as Wordsworth, Coleridge, Keats, Tennyson, Browning, Newman, Dickens, Thackeray. 4 credits.

484-584 English Writers of the Eighteenth Century. Writings, background and criticism of one or more of the principal English writers of the 18th century, such as Defoe, Swift, Pople, Johnson, Fielding, Goldsmith, Gray. 4 credits.

Change the following:

270 Change title to The English Renaissance.

272 Change title and description to: The Romantics I. The older generation: Blake, Coleridge, Wordsworth, Scott, Southey, and the minor poets, essayists, and periodical writers. 3 credits.

276 Change title and description to: The Victorian Poets. Poetry of Tennyson, Browning, Arnold, Rossetti, and related authors. 3 credits.

- 290 Change title to Establishment of a National American Literature.
- 292 Course number change to 383.
- 333 Change description and credits to: Nature and development of the English language in America, based on modern linguistic scholarship. 3 credits.
- 334 Change title, description and credits to: Grammars of English. Various grammatical theories and analyses of the English language and their applications to the teaching of English. Prerequisite English 333. 3 credits.
- 343 Change title and credits to: Shakespeare I. 3 credits.
- 380 Change title to Medieval English Literature.
- 382 Change title and description to: Seventeenth Century to the Restoration. John Donne and the metaphysical poets, Ben Jonson and the poets of the classical school, introduction to Milton and the prose writers. 3 credits.
- 384 Change title and description to: Eighteenth Century. 1700-1750. Pope, Swift, Defore, Fielding, Johnson, and related authors. 3 credits.
- 386 Change title to Twentieth Century English Literature.
- 390 Change title to Modern American Literature.
- 430 Change credits from 4 to 3.
- 440 Change title, description, and credits to: Milton. Examination of texts, background, and criticism of John Milton. 3 credits.
- 441-541 Change description to: Critical and historical studies in the 18th, 19th, and 20th century novel, chiefly British. 4 credits.
- 452 Change title and description to: Teaching Language Arts in Secondary Schools. Principles, methods, materials and organization of the teaching of literature, language, and composition. To be taken before student teaching. 4 credits.
- 460 Course number change to 294.
- 549 Change title and description to: Contemporary Thought in Literature. Philosophical and cultural content of selected contemporary writings. 4 credits.

Drop the following:

515, 530, 538, 540, 560 and 535

FOREIGN LANGUAGES

Add the following programs:

BACHELOR OF ARTS

FRENCH

Major (36)

231, 232, 233 Intermediate (12)
Electives in 300 or 400 courses (24)

Minor (24)

231, 232, 233 Intermediate (12)
Electives in 300 or 400 courses (12)

GERMAN

Major (36)

231, 232, 233 Intermediate (12)
Electives in 300 or 400 courses (24)

Minor (24)

231, 232, 233 Intermediate (12)
Electives in 300 or 400 courses (12)

SPANISH

Major (36)

231, 232, 233 Intermediate (12)
Electives in 300 or 400 courses (24)

Minor (24)

231, 232, 233 Intermediate (12)
Electives in 300 or 400 courses (12)

GEOGRAPHY

Phillip L. Tideman, Acting Chairman

BACHELOR OF ARTS

Major (48)

- 271 Economic Geography (4)
- 273 Physical Geography (4)
- 405 Cartography (4)
- Additional Minimum of:
- 4 Regional courses (12-20)
- 3 Topical courses (9-15)
- 2 Related electives (6-10)
- Foreign Language (12)

Drop the following course:
497

Minor (36)

- 271 Economic Geography (4)
- 273 Physical Geography (4)
- 405 Cartography (4)
- Additional Minimum of:
- 3 Regional courses (9-15)
- 2 Topical courses (6-10)
- 1 Related elective (3-6)

HISTORY

Change the following:

History requirements in History Major (48 cr.) as follows:

- 242 American History 1783-1865 (4)
- 243 American History, 1865-1912 (4)
- 244 Modern European History 1500-1763 (4)
- 245 Modern European History 1763-1914 (4)

- 314 Medieval History (3)
- 331 Ancient History (4)
- 418 American Colonial History (3)
- 442 Recent American History, 1912 to present (4)
- Electives in History (6)

BACHELOR OF ARTS DEGREE

Major (48)

A minimum of one course in each of the four fields of Ancient, Medieval, Modern European, and American History (40)

Electives in two departments of Social Sciences other than History (8)

Foreign Language (12)

Minor (36)

A minimum of one course in each

of the four fields of Ancient, Medieval, Modern European, and American History (28)

Electives in two departments of Social Sciences other than History (8)

Minor (24)

A minimum of one course in each of the four fields of Ancient, Medieval, Modern European, and American History (24)

COURSE DESCRIPTIONS

Add the following:

458-558 Historical Criticism. Problems in and methods of historical accuracy and consistency; detailed study of references, chronology, availability of knowledge, and recognition of historical "myths". 2 credits.

Change the following by the addition of prerequisites:

334 Prerequisite: 244 and 245

339 Prerequisite: 244 and 245

348 Prerequisite: 245

436 Prerequisite: 245

437-537 Prerequisite: 245

442-542 Prerequisite: 243

450-550 Prerequisite: 244 or 245

455-555 Prerequisite: 242 and 243

456-556 Prerequisite: 442-542

Change the following:

- 242 Change the title and description to: American History 1783-1865.** Add to the description: Civil War.
- 243 Change the title and description to: American History, 1865-1912.** Reconstruction; developments and adjustments resulting from growth of industry; progressive movement. 4 credits.
- 334 Change title, description and number to: 434 Modern Russia, 1613-1917.** Evolution of Russia's distinctive social, economic, and political institutions. Russia's position in relation to Western Europe and Asia. Prerequisite: 244 and 245. 4 credits undergraduate, 3 credits graduate.
- 437-537 Change title to: Two World Wars, 1912 to Present.**
- 442-542 Change title to: Recent American History 1912 to Present.**
- 448-548 Change course description with addition of the following sentence:** Prior courses in American History, History of Philosophical Thought, and American Literature strongly recommended.
- 457-557 Change description to: From March 1917 to present.** Revolution in theory and practice. Five-year plans; structure of the Soviet state; Communist Party and socialist culture. Soviet state in relation to Western Europe and Asia. Prior course in European history or History 434 strongly recommended. 4 credits undergraduate, 3 credits graduate.
- 522 Change number to:**
452-552 Historiography. Significant historians and historical theory; problems in presentation of historical interpretation. 2 credits.

Drop the following:

536

MATHEMATICS

Alyn Dull, Chairman

Add the following program:

- | | |
|---|---|
| Elementary Education Minor (24) | 356 Modern Algebra (4) |
| 241 Analysis I (4) | 429 Probability and Statistics (4) |
| 242 Analysis II (4) | Electives (Senior College Mathematics) (4) |
| 355 Foundations of Mathematics (4) | |

PROGRAM CHANGES:

Major and minor requirements revised to substitute Math 424 Elements of Geometry for Math 425 College Geometry. Substitute Math 354 Foundations of Algebra for Math 355 Foundations of Mathematics in both majors and minors.

COURSE DESCRIPTIONS**Add the following:**

- 270 IBM 1620 Computer Programming.** Programming concepts. Gotran, Fortran, Symbolic Programming System, machine language, internal data transmission. Laboratory. 4 credits.
- 354 Foundations of Algebra.** Sets, logic and philosophy, real number system, algebraic structure. 4 credits.
- 424-524 Elements of Geometry.** Development of geometry. Nature of proof. Finite. Postulate systems for plane and space. Distance, betweenness congruence, separation. Inequalities, parallelism, similarity, area. Prerequisite: High school geometry. 4 credits.

470-570 Numerical Analysis. Difference tables and application, interpolation, numerical integration and differentiation, Taylor's series, orthogonal polynomials, error analysis, numerical solution of equations, matrix theory. Laboratory in computer programming. Prerequisite: Math 434 or enrollment therein, and Math 270. 4 credits.

Change the following:

426-526 Change prerequisite from Math 425 to 424.

429 Change the prerequisite to Math 242.

432-532 Change name from Calculus III to Intermediate Calculus.

434-534 Change prerequisite from 332 or 244 to 432.

Drop the following:

355

MUSIC

Add the following program:

Vocal Minor, Elementary or Secondary Emphasis (36)

- 100, 101, 200 Theory (9)
- 165 Piano (3)
- 169 Voice (3)
- 211 Foundations of Music Education—Vocal (3)
- 240 Conducting (3)
- Organizations (3)
- Electives (2)

Elementary Emphasis

- 300 Music Education—Elementary Grades (3)
- 301 Music Resources—Elementary Grades (4)
- 401 Vocal Music Administration (3)

Secondary Emphasis

- 302 Music Education—Junior High School (5)
- 341 Choral Conducting and Literature (5)
- 050 Laboratory in music. Not applicable on degree. 2 credits.

Drop the following program:

Vocal minor—Elementary (24)

COURSE DESCRIPTION

Add the following:

Electives (2) to replace the omission of Music 402 in Vocal Emphasis.

Change the following:

401 Change title and description to:

401-501 Vocal Music Administration. Staff relations; co-teaching; conferences; workshops; demonstration and observation lessons; purchase and maintenance of materials and equipment. 3 credits.

406 Change number to:

406-506 Acoustics of Music. Nature of sound and its application in music; characteristics of sound waves; vibratory sources of music sounds; physical basis of harmony and scales. Prerequisite: Music 202. 3 credits.

Drop the following:

402 Secondary Music Administration.

560 Music Consultant in Elementary School.

PHILOSOPHY

John Phillips, Chairman

COURSE DESCRIPTIONS

Add the following:

- 333 **Social and Political Philosophy.** Principles justifying ideal social and political forms. Philosophical analysis of key concepts such as justice, right, the state, liberty, power, public interest. 4 credits.
- 335 **Nineteenth Century Philosophy.** Critical appraisal of the philosophy of Hegel, Schopenhauer, Nietzsche, Kierkegaard, Marx, Mill, or other important nineteenth century figures. 4 credits.
- 336 **Philosophy of Religion.** Creation, revelation, the nature and existence of God, and religious language as philosophical problems. 4 credits.
- 337 **Philosophy of Literature.** Themes in philosophically oriented literature, taken from such writers as Goethe, Dostoevski, Mann, Kafka, Proust, Camus, Piradello. 4 credits.
- 338 **Metaphysics.** Theories of the real and the unreal, being and change, mind and matter, other fundamental categories. 4 credits.
- 445-545 **Value Theory.** Nature, types, criteria, and justification of values; intrinsic and instrumental values; the relation of values to facts. 4 credits.
- 446-546 **Analytic Philosophy.** Readings from Moore, Austin, Schlick, Carnap, Hempel, Reichenbach, Feigl, and others of the contemporary movement. 4 credits.

Change the following:

- 443-543 Course number change to 334.
- 444-544 Description change to: A critical appraisal of the philosophy of Bergson, Husserl, Sartre, Jaspers.

PHYSICS

Add the following programs:

BACHELOR OF ARTS

Major (60)

- | | |
|------------------------------------|---|
| 234, 235, 236 General Physics (15) | 431, 432, 433 Modern Physics (10) |
| 328 Atomic Physics (5) | 436 Theoretical Physics—Mechanics (5) |
| 329 Nuclear Physics (4) | 437 Theoretical Physics—Electricity (5) |
| 333 Optics (4) | |
| 334 Thermodynamics (5) | Elective (4) |
| 335 Electrical Measurements (3) | |

(Students with a B.A. major in physics must take 24 or more supporting credits in mathematics. These credits should include Mathematics 241, 242, 243, 244, and one course from Mathematics 432, 433, 435, and 457.)

Minor (36)

- | | |
|------------------------------------|--------------------------------|
| 234, 235, 236 General Physics (15) | 332 Electronics (4) |
| 328 Atomic Physics (5) | Electives (senior college) (8) |
| 329 Nuclear Physics (4) | |

Program Changes:

Comprehensive Physics Major. Drop Math 221, 224 from major. Add to the major, Math 244, 432.

COURSE DESCRIPTIONS

Add the following:

459-559 Methods and Materials for Teaching Physics. Modern approaches to teaching of high school physics in classroom and laboratory, including materials of Physical Science Study Committee: Laboratory. 2 credits.

477-577 Physics Institute. Selected topics in physics for experienced teachers of science. Laboratory. 3-4 credits.

Change the following:

234 Change prerequisite to: Calculus or concurrent enrollment in Mathematics 241.

335 Change credits to 3.

436-536 Change credits to 5.

437-537 Change credits to 5.

Drop the following:

205

SOCIOLOGY

Change the following program:

Bachelor of Arts Major changes:

262 The Family (3) or,

369 Marriage and Family (4)

Electives in Sociology (12-14)

COURSE DESCRIPTIONS

262 Change credits and description to: History, variations, functions, and changes in the family institution. Emphasis upon the family system. Prerequisite: Soc. 260. 3 credits.

470 Change credits to 3.

Drop the following:

362 Social Studies Workshop in International Problems.

363 Dynamics of American Culture: a Seminar.

SPEECH AND DRAMATIC ART

Change the present major program in speech and dramatic art for the bachelor of science degree.

Major-General Speech (48)

Core (22)

Plan B Public Address (12)

235 Introduction to the Theatre (4)

320 Advanced Public Speaking (4)

331 Oral Interpretation (3)

349 Directing I (3)

481 Speech Science (3)

426 Argumentation (3)

452 Teaching of Speech (2)

***Plan A Theatre (12)**

236 Technical Production

Methods I (2)

248 Acting I (3)

446 Scenic Design I (3)

491 Drama I (4)

Electives: (12)

*Speech 496. Summer Theatre Workshop (1-8) may be substituted for any courses in the Plan A major, excepting the Drama sequence, courses in public address, courses in speech pathology and audiology and Oral Interpretation.

371 Introduction to Radio and

Television (4)

321 Parliamentary Procedure (2)

325 Discussion and Conference

Leadership (3)

428 Persuasion (3)

Electives (12)

The following courses, not assigned in the Department of Speech and Dramatic Art are acceptable as electives in the Plan B (Public Address) Major:

Phil. 220 Logic (4)

Hist. 325 American Economic

History (4)

Hist. 442 Recent American History (4)

Hist. 448 Social Forces in American

History (3)

COURSE DESCRIPTIONS**Add the following:**

- 248 Acting I.** Development of vocal and physical skills basic to acting. Prerequisite: Speech 235. 3 credits.
- 349 Directing I.** Methods of selecting, casting, and rehearsing plays for production. Prerequisite: Speech 235. 3 credits.
- 385 Audiology.** Theory and research of hearing problems and audiometric evaluation. Supervised practice or hearing testing. Prerequisite: 283 or 293. 4 credits.
- 386 Speech Reading and Auditory Training.** Theory and practice of lip reading and auditory training for the aurally handicapped. Prerequisite: Speech 385. 3 credits.
- 387 Clinical Management of the Preschool Aurally Handicapped Child.** Theory and research in the nature and management of the pre-school aurally handicapped child. Prerequisite: Speech 385. 3 credits.

Change the following:

- 161 Change title to: Fundamentals of Speech.**
- 227-228-229 Change course number, title, and description to 227-427 Intercollegiate Forensics.** Current national debate and discussion topics. Participation primarily in debate and extemporaneous speaking. Opportunity for participation in oral interpretation, discussion, and original oratory. 3 consecutive quarters for credits. Maximum of 6 credits.
- 235 Add "Lab" to description.**
- 236 Add "Lab" to description and change to 3 credits.**
- 237 Add "Lab" to description.**
- 283 Change description to:** Characteristics, causes, and management principles of speech and hearing problems encountered in individuals of school age. For the classroom teacher. 4 credits.
- 293 Change description to:** Introduction to Speech Pathology and Audiology. Survey of concepts basic to the understanding of normal and abnormal speech and hearing; principles of treatment. 3 credits.
- 320 Change title and description to: Advanced Public Speaking.** Application of principles and methods of organizing and composing the public speech. 4 credits.
- 321 Change title to: Parliamentary Procedure.**
- 371 Change title and description to: Introduction to Radio and Television.** Origin, Development, nature, and function of television and radio in society. Principles and practice of broadcasting production. Prerequisite: English 263 or 273. 4 credits.
- 380 Change description to:** Gross anatomy of the hearing and vocal mechanisms and their supporting structures. 3 credits.
- 381 Change description to:** Basic scientific concepts of acoustics, physiology, and linguistics fundamental to understanding speech and hearing phenomena. 3 credits.
- 382 Change description to:** Research and theory of the nature, etiology, and treatment of delayed language, functional articulation, and stuttering problems. Prerequisite: Speech 283 or 293. 3 credits.
- 420-520 Add to the present description:** Completion of Speech 320 is recommended.
- 426-526 Add to the present description:** Completion of Speech 320 is recommended.

- 428-528 Change title to: History and Criticism of Public Address.
 442-542 Add "Lab" to description.
 445 Add "Lab" to description and change title to: Costuming.
 446-546 Add "Lab" to description and change title to: Scenic Design I. 3 credits.
 447-547 Add "Lab" to description and change title to: Scenic Design II.
 448-548 Change title and description to: Acting II. Analysing and creating a stage character. Prerequisite: Speech 248. 3 credits.
 449-559 Change title and course description to: Directing II. Study and application of advanced directing techniques. Prerequisite: Speech 349.
 453 Change title and description to: The Speech and Hearing Clinician in the Schools. Philosophy, responsibilities, and operating procedures of the professional worker in the public schools. Prerequisite: Speech 283 or 293.
 480 Change course description to: Supervised training in therapeutic techniques. Can be repeated to a maximum of 6 and 9 credits by B.S. and B.A. majors respectively. Prerequisite: Speech 454.
 482 Change course description to: Research and theory of the nature, etiology, and treatment of speech disorders associated with voice production and with cerebral palsy and cleft palate. Prerequisite: Speech 283 or 293.
 491-591 Change title to: Drama I. The Beginnings to Ibsen.
 492-592 Change title to: Drama II. Modern Drama.
 493-593 Change title to: Contemporary Drama.
 521 Change number, title, and description to:
 421-521 History and Criticism of American Public Address. Major figures in American rhetoric from 1750. 3 credits.

Drop the following:

234, 384 and 483.

INTERDEPARTMENTAL PROGRAMS

LANGUAGE ARTS

Replace present programs with the following:

Language Arts Major (84)

- 235 Introduction to Theatre (4)
 320 Public Speaking (4)
 325 Discussion, or 426
 Argumentation (3)
 331 Advanced Composition (2)
 333 The English Language (3)
 334 The Grammars of English (3)
 343 Shakespeare I (3)
 452 Teaching of Language Arts in
 Secondary Schools (4)
 Any 1 of the following courses:
 430 Chaucer (3)
 435 History of the English
 Language (3)
 440 Milton (3)
 443 Shakespeare II (3)
 1 course each from any 4 English
 Literature Groups (12)
 1 course each from any 3 American
 Literature Groups (9)

Library Science Emphasis (34)

- 275 Introduction to Librarianship (2)
 375 Functions of the School
 Library (4)

376 Selection of Library

- Materials (4)
 377 Reference (4)
 378 Technical Processes (4)
 475 Elementary School Library
 Materials (3)
 476 Secondary School Library
 Materials (3)
 477 Practicum (2)
 251 Children's Literature or
 353 Adolescent Literature (3-4)
 Electives in English (4-5)

Elementary Education Language Arts Minor (36)

- 234 Recreational Dramatics (3)
 331 Oral Interpretation (3)
 331 Advanced Composition, or
 332 Advanced Composition (2)
 333 The English Language (3)
 Electives in English, Speech,
 Journalism (1)
 Electives in Literature (15)

SCIENCES

COURSE DESCRIPTIONS

Add the following:

456-556 Methods and Materials for Teaching General Sciences. Modern approaches to teaching of general sciences in junior and senior high school, including classroom and laboratory techniques in earth science and conservation. Laboratory. 2 credits.

477-577 Science Institute. Selected topics in earth sciences for experienced teachers of general science. Laboratory. 3-4 credits.

Drop the following:

504

SOCIAL SCIENCES

Add the following:

BACHELOR OF ARTS

Social Sciences Major (48)

- Soc 260 Principles (4)
- Econ 273-274 Principles of Econ (8)
- PoSci 281 American Government (4)
- Soc 465 Social Psychology or
- Soc 467 Cultural Anthropology (4)
- PoSci 382 State Government (3)
- Electives in Sociology, Economics and Political Science (21)
- Electives in Geography or History (4)

Minor (36)

- Soc 260 Principles (4)
- Econ 273-274 Principles and Policy (8)
- PoSci 281 American Government (4)
- Soc 465 Social Psychology or
- Soc 467 Cultural Anthropology (4)
- PoSci 382 State Government (3)
- Electives in Sociology, Economics or Political Science (9)
- Electives in Geography or History (4)

Change the following:

353 Change course description to: Philosophy, methods, and materials in the teaching social studies in the secondary school. 4 credits.

SOCIAL STUDIES

Add the following:

BACHELOR OF SCIENCE

Social Studies Majors (84)

- Sociology Emphasis
- 260 Principles of Sociology (4)
- 261 Social Deviation (3)
- 366 Juvenile Delinquency (3) or,
- 367 Criminology (3)
- 461 Western Social Thought (4)
- 465 Social Psychology (4)
- 467 Cultural Anthropology (4) or,
- 359 The American Indian (4)
- 262 The Family (3) or,
- 369 Marriage and the Family (4)
- 464 School and Community (3)

- Electives in Sociology (11-12)
- One regional and one topical course in Geography (8)
- One American and one European course in History (8)
- 281 Political Science (4)
- 382 Political Science (3)
- 273 Economics (4)
- 274 Elective in Economics (4)
- 353 Social Studies, Teaching of Secondary Social Studies (4)
- 350 Psychological Statistics (4)
- Electives in Related Areas (4)

Change History requirements in Social Studies Major (84 cr.) as follows:

- 242 American History, 1783-1865 (4)
- 243 American History, 1865-1912 (4)
- 244 Modern European History, 1500-1763 (4)
- 245 Modern European History, 1763-1914 (4)
- 314 Medieval History (3)
- 331 Ancient History (4)
- 418 American Colonial History (3)
- 442 Recent American History, 1912 to present (4)
- Electives in History (10)

GROUP LEADERSHIP

Drop the following:

202, 205, 210, 211, 212, 215, 217, 310, and 320.

